ORDER NO. MD9905090C2

Service Manual

Digital Surround Processor

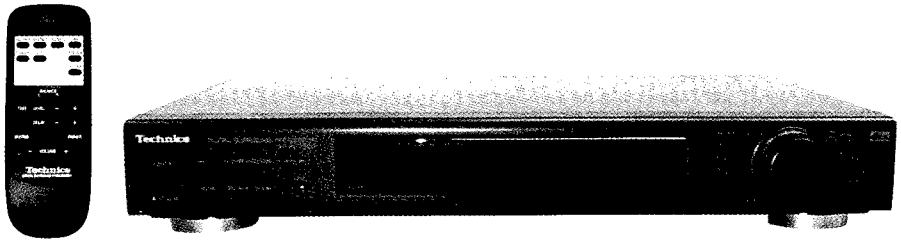
Processor

DOLBY SURROUND PRO • LOGIC

DOLBY DIGITAL

DIGITAL dts SURROUND

SH-AC500D



Colour

(K) . . . . . Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	

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DTS Inc. USP No. 5, 451, 942.

■ Specifications

■ AUDIO

Frequency response

FRONT L/R, CENTER, SURROUND L/R (LARGE)

20 Hz-20 kHz, ±1 dB

Outlet voltage/Impedance 2 V (at 0 dB)/1 kΩ

Input impedance

LINE 22 kΩ

COAXIAL 75 kΩ

Delay time

DOLBY DIGITAL

CENTER 0 – 5 ms

SURROUND L/R 0 – 15 ms

DOLBY PRO LOGIC

SURROUND L/R 15 – 30 ms

Total harmonic distortion

FRONT L/R (1 kHz, 0 dB, PCM) 0.007%

Dynamic range 96 dB

S/N (IHF-A) 100 dB

Load impedance More than 10 kΩ

■ GENERAL

Power supply AC 230 - 240 V, 50 Hz

Power consumption 18 W

Dimensions (W X H X D) 430 X 69.4 X 301.4 mm

Weight 2.6 kg

Notes :

Specifications are subject to change without notice.

Weight and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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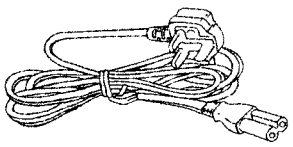
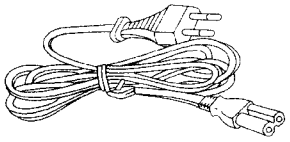
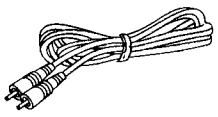
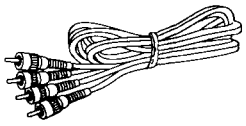
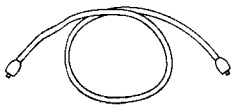
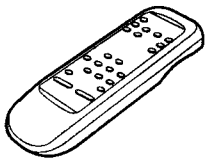
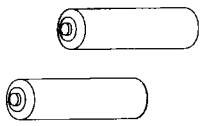
MC-Service

■ Contents

	PAGE
• ACCESSORIES	2
• CAUTIONS FOR AC MAINS LEAD	3
• FRONT PANEL CONTROLS	4
• CONNECTIONS	5 ~ 7
• SPEAKER SETTING	8
• SPEAKER OUTPUT ADJUSTMENTS	9 ~ 10
• DELAY TIME ADJUSTMENTS	11
• ENJOYING SOUND IN A VARIETY OF REPRODUCTION MODES	12 ~ 13
• OTHER FUNCTIONS	14
• REMOTE CONTROL QUICK REFERENCE	15
• OPERATION CHECKS	16 ~ 17
• TERMINAL FUNCTION OF IC'S	18
• TYPE ILLUSTRATION OF IC'S, TRANSISTORS AND DIODES	19
• WIRING CONNECTION DIAGRAM	20
• BLOCK DIAGRAM	21 ~ 23
• SCHEMATIC DIAGRAM	24 ~ 30
• PRINTED CIRCUIT BOARD	31 ~ 35
• CABINET PARTS LOCATION	36
• REPLACEMENT PARTS LIST	37 ~ 38
• RESISTORS & CAPACITORS	39 ~ 41
• PACKING MATERIALS & ACCESSORIES	42
• PACKAGING	42

■ Accessories

 AC power supply cord for United Kingdom	 AC power supply cord for Others	 Monaural connection cables	 Stereo connection cables
 Optical-fiber cable	 Remote control unit	 Batteries	

■ Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark ⟨ASTA⟩ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION !
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

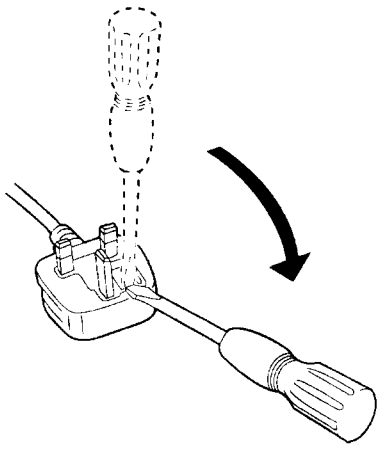
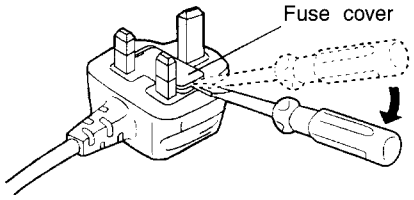


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

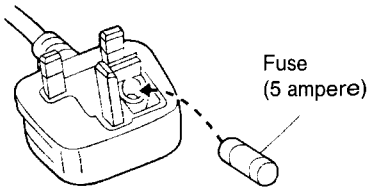
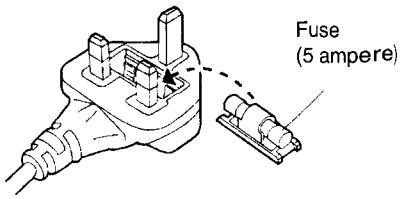
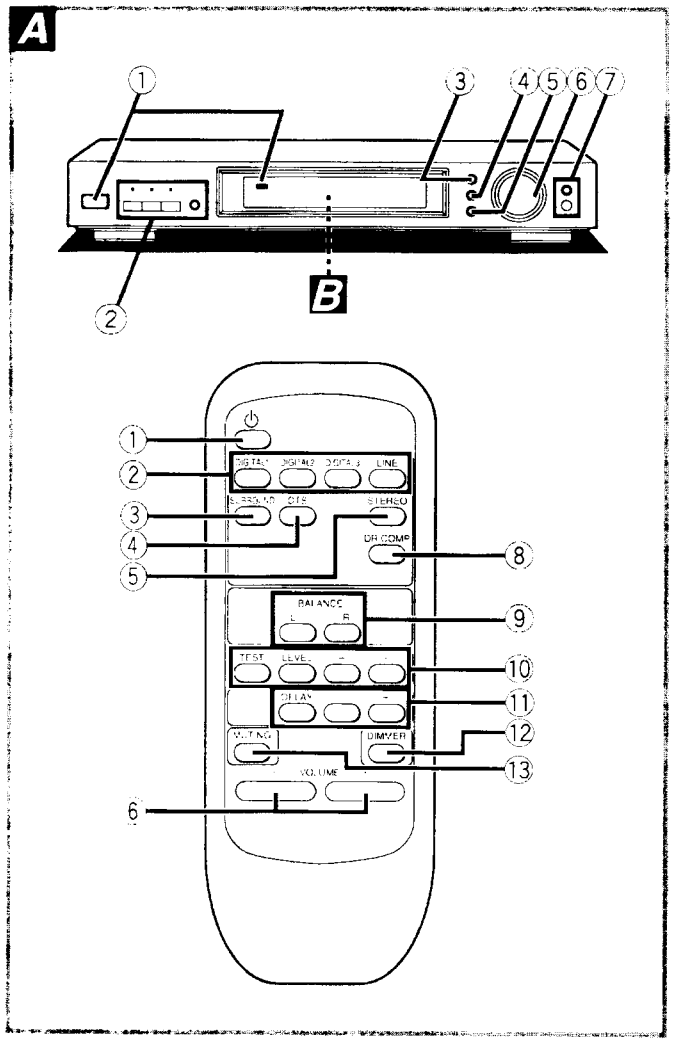
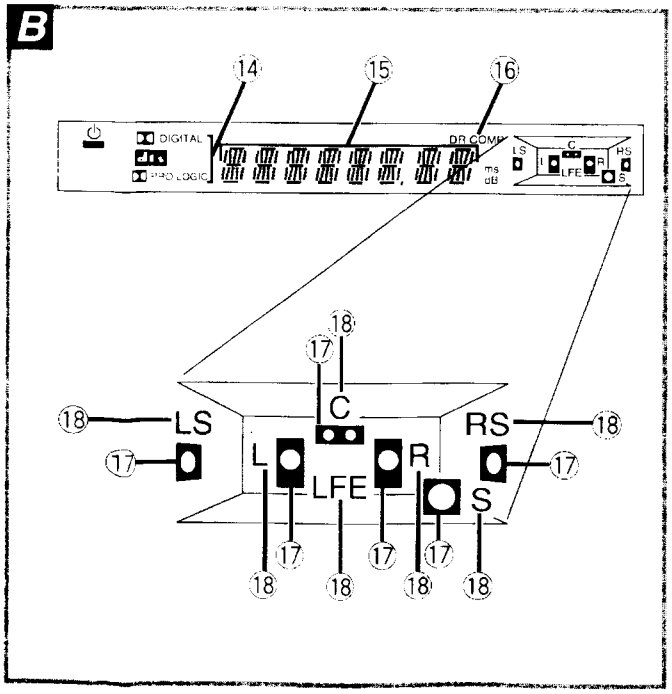


Figure B



■ Front panel controls





Control section A

① Unit on/off button (▬ ⏻ ▬ ⏻/I) and remote standby indicator (⏻)

Use this button to turn the unit on and off.

▬ (off): The unit is in standby mode.

▬ (on): The unit is on. The unit can be turned on and off with the remote control. When the unit is turned off with the remote control it is in remote standby and the indicator lights.

The unit is still using a small amount of power in the standby and remote standby conditions. Standby uses less power.

When the unit is connected to the AC mains lead, this indicator lights up in standby mode and goes out when the unit is turned on.

② Input select buttons/indicators (DIGITAL 1, DIGITAL 2, DIGITAL 3, LINE)

③ Surround mode button (SURROUND)

④ Digital Theater Systems mode button (DTS)

⑤ Stereo mode button (STEREO)

⑥ Volume control (VOLUME)

Main unit only

⑦ Speaker setting buttons (CHANNEL/SET, SELECTOR)

Remote control only

⑧ Dynamic range compression button (DR COMP)

⑨ Balance control (L, R)

⑩ Output level setting buttons (TEST, LEVEL, –, +)

⑪ Delay time setting buttons (DELAY, –, +)

⑫ Dimmer button (DIMMER)

⑬ Muting button (MUTING)

Display section B

⑭ Surround format indicators (DIGITAL, dts, PRO LOGIC)

⑮ Display

⑯ Dynamic range compression indicator (DR COMP)

⑰ Speaker indicators

Light in accordance with the speaker setting, and each of the indicators corresponding with the speaker concerned flashes when;

- the type or presence of that speaker is set,
- the test signal is output from that speaker,
- the output level or delay time of that speaker is adjusted.

⑱ Signal format indicators (LS, C, RS, L, R, S, LFE)

These indicators light up to indicate the Dolby Digital or DTS input signal format.

LS: Surround speaker (left)

C: Center speaker

RS: Surround speaker (right)

L: Front speaker (left)

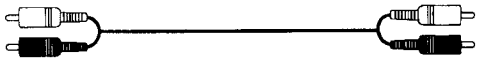
R: Front speaker (right)

"S" represents the mono surround and "LFE" (Low Frequency Effect) is a channel for the deep-bass effect in the low frequency range.

■ Connections

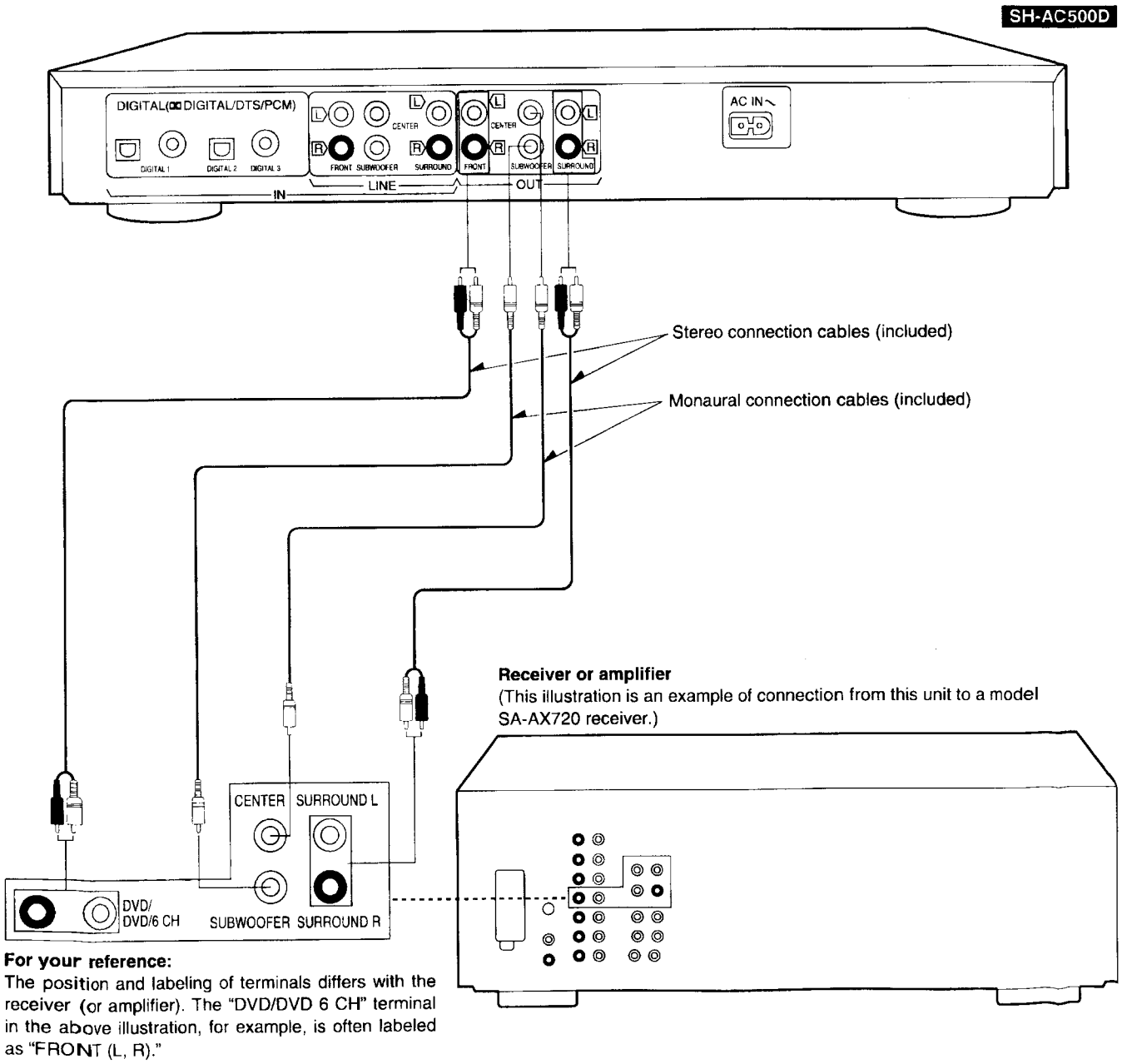
Before proceeding with the connections, ensure that the power to all the units has been turned off.
Connect the AC power supply cord only after all other cables and cords are connected.

Stereo connection cable
White (L)
Red (R)



Connection to a receiver or amplifier

Connection to a receiver (or amplifier) with 6 channel discrete input terminals

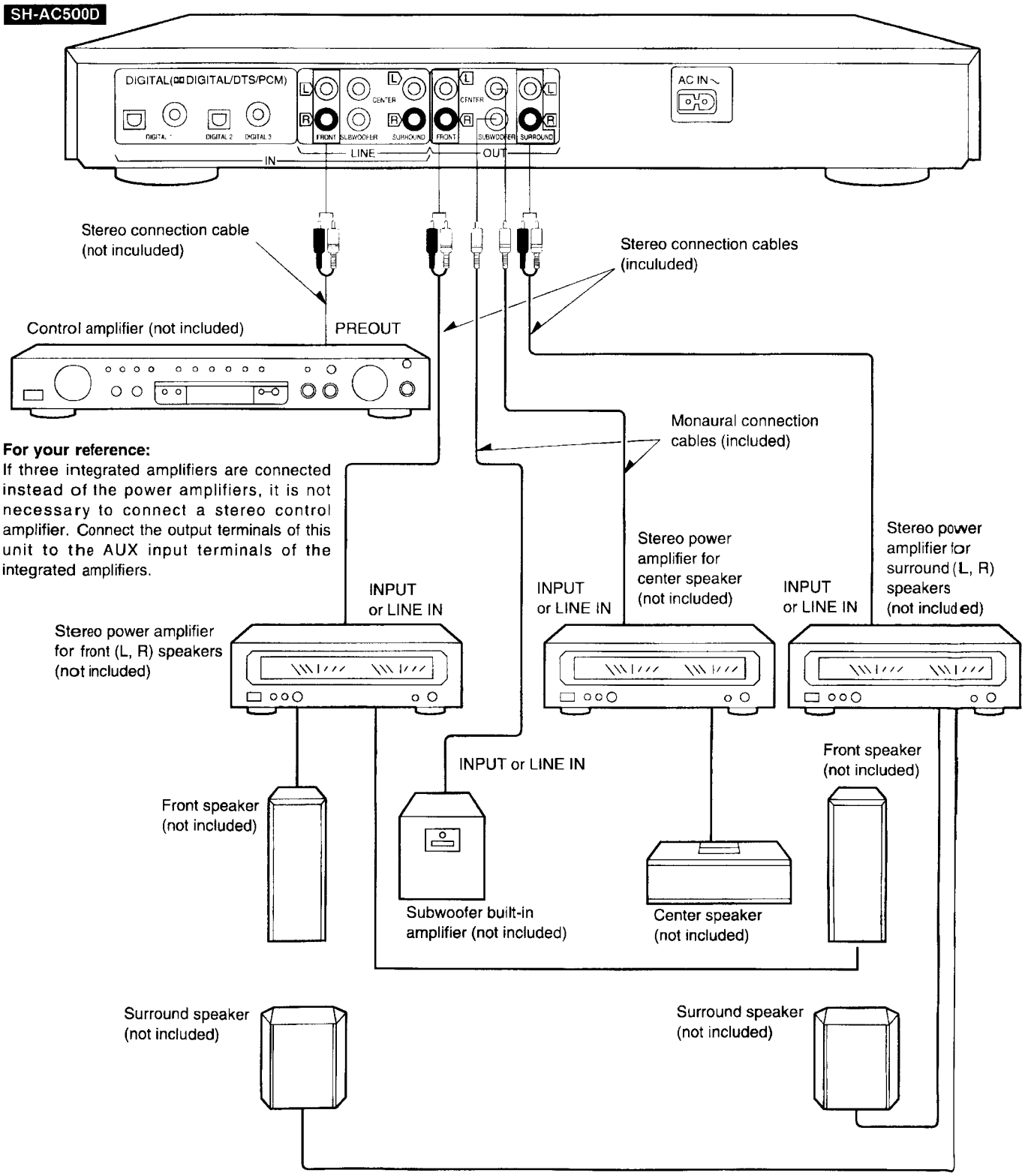


For your reference:
The position and labeling of terminals differs with the receiver (or amplifier). The "DVD/DVD 6 CH" terminal in the above illustration, for example, is often labeled as "FRONT (L, R)."

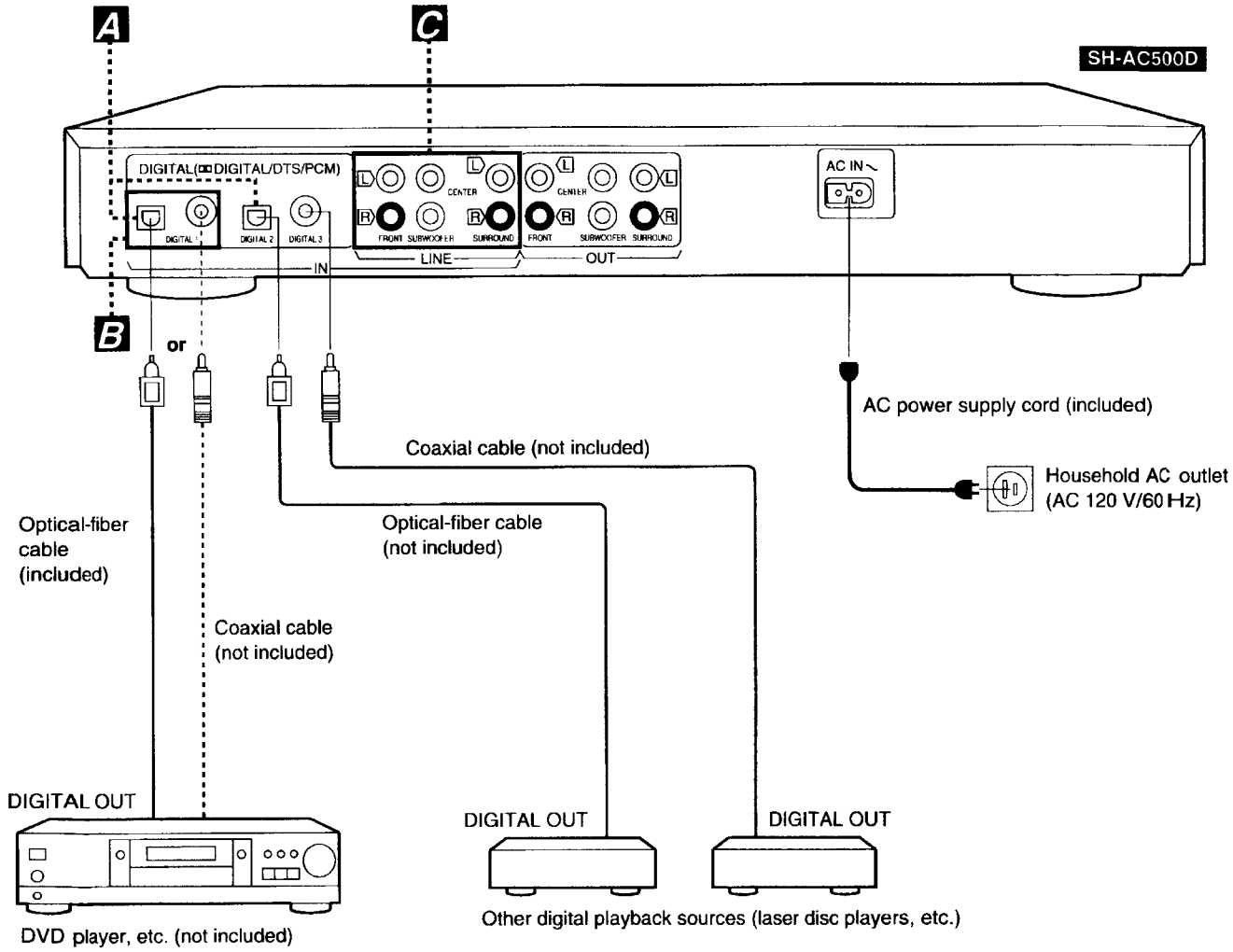
MC-Service

Connections for outputting the 6 channel signals through 3 power amplifiers

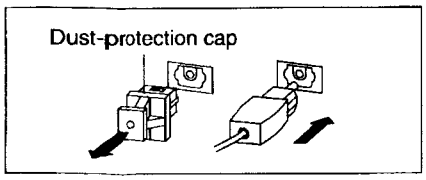
This illustration is an example of connection from this unit to a stereo control amplifier of model SU-C1000 and three stereo power amplifiers of model SE-A1000.



Connections to audio-visual equipment and the AC power cord



Connection for optical-fiber cable A



Note

- Do not bend the optical-fiber cable at a sharp angle.
- If the digital optical connector is not going to be used, be sure to attach the dust-protection cap to prevent exposure to dust.

"DIGITAL 1" terminals B

Disconnect the coaxial cable from the DIGITAL 1 terminal when using an optical fiber cable. Only the coaxial cable is recognized if both types are connected.

"LINE IN" terminals C

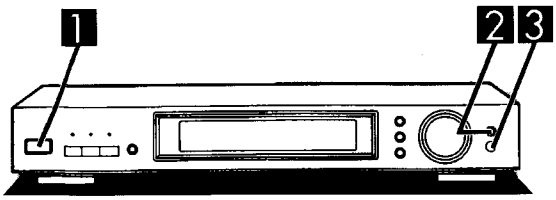
(Only if a control amplifier has not been connected.)
You can connect a set-top box tuner for digital television or similar decoder.
If "LINE" is selected with the input selector on this unit, the signals received through these terminals are output as they are without passing through any sound control circuits (i.e. no volume or other sound adjustments can be made with this unit.)

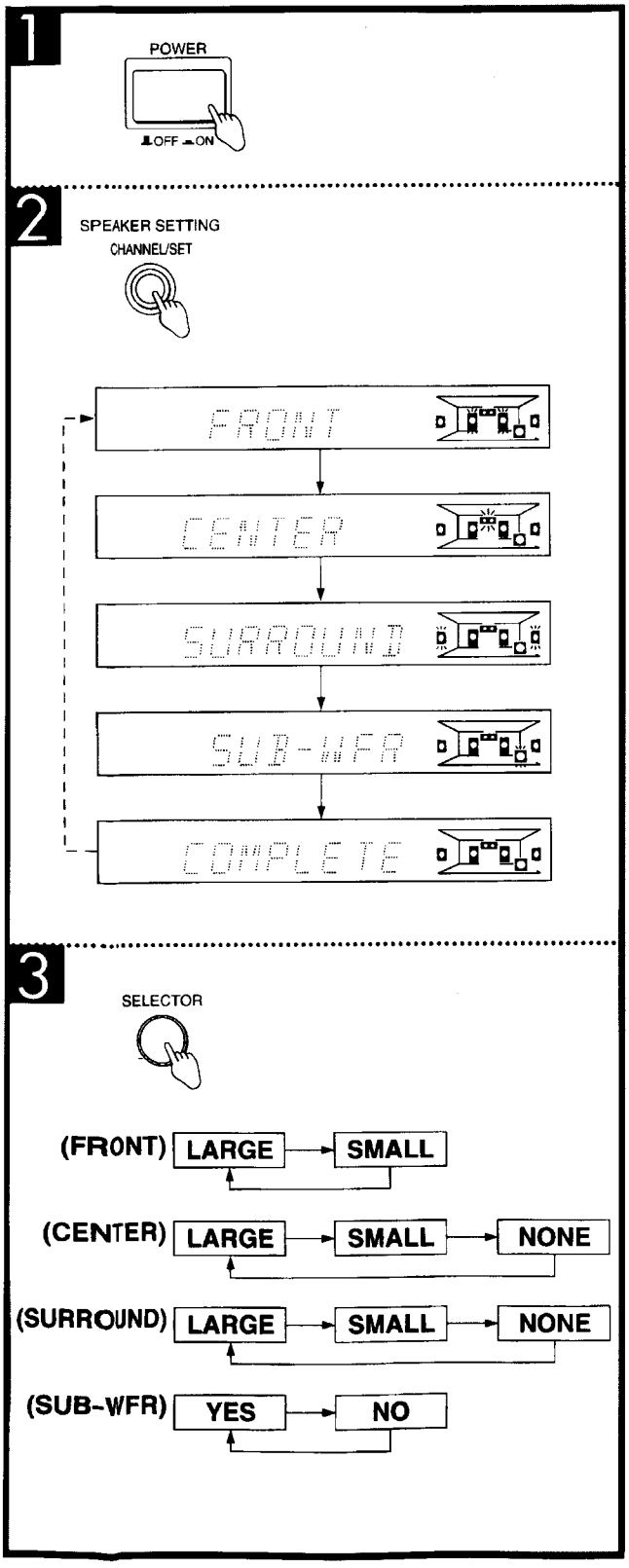
Note

- Dolby Digital RF (radio frequency) signals cannot be decoded with this unit even if a unit that has Dolby Digital RF output terminals is connected to this unit.
- **Turn off the power to this unit if unusual hissing or beat sounds are heard while listening to FM, AM, or television broadcasts.**

MC-Service

■ Speaker setting





Set the types and presence of the speakers before enjoying the sound by reproducing the input source.

Before proceeding:
Check the frequency range of each speaker to be used. Consider speakers capable of playing back low frequency sounds (below around 100 Hz) as LARGE. Consider speakers not capable of playing back low frequency sounds as SMALL.

1 Press POWER.

2 Press CHANNEL/SET, and select the channel for which the speaker is to be set.
Each time the button is pressed, the channel display is switched in the listed order.
FRONT: Front speakers **CENTER:** Center speaker
SURROUND: Surround speaker **SUB-WFR:** Subwoofer
COMPLETE: Select this when you have completed the settings.

The selected channel is shown on the display for approx. 2 seconds. The current setting for that channel is then shown as a flashing display. The indicator corresponding to the selected speaker also continues to flash.

3 Press SELECTOR, and set the type (LARGE, SMALL) and presence (YES, NO or NONE) of the speaker.
Each time the button is pressed, the display is switched in the listed order.
LARGE: select if the speaker can produce low frequency sounds,
SMALL: select if the speaker cannot produce low frequency sounds,
NONE: select if you are not using a center speaker or surround speakers,
YES: select if you are using a subwoofer,
NO: select if you are not using a subwoofer.

The sound for speaker channels that are set to "NONE" or "NO" are output from the front speakers. DTS format software, however, depends upon all channels being operable, and so the sound for speakers not connected is not heard at all, no matter what settings are made.

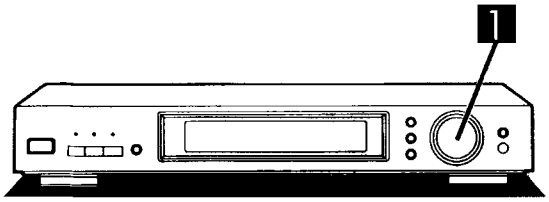
4 Repeat steps 2 and 3 to complete the settings for all the channels.

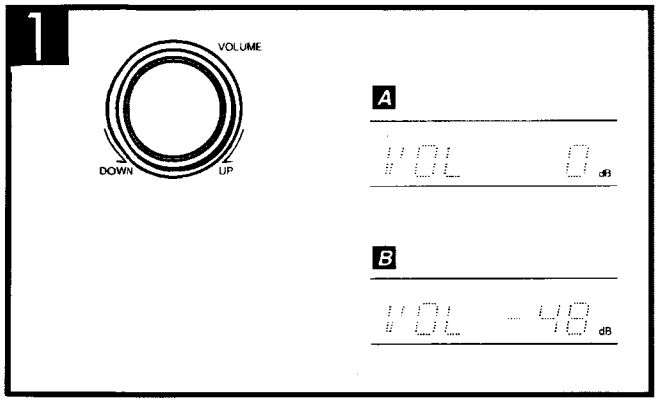
5 Press CHANNEL/SET to select "COMPLETE".
The settings are now entered into the unit's memory. The display goes out after about 2 seconds and the previous display reappears.
The speaker indicators light up unless "NONE" or "NO" has been selected for the corresponding channel.

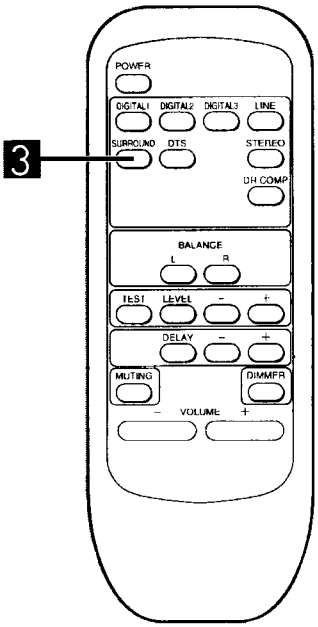
Note
If no buttons are pressed for approx. 10 seconds during the setting process, all previous settings are canceled, the setting mode is released, and the original display is restored.
Begin the setting process again if this occurs.

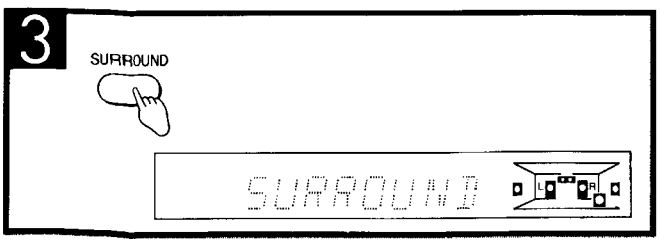
For your reference:
The setting remains as it is until changed by the above procedure, even after the power has been turned off.

■ Speaker output adjustments









Set the initial output level first, then proceed to adjust the output level for each speaker channel.

Setting the initial volume level

When this unit is connected to a receiver (or amplifier) that has 6 channel discrete input terminals:

1 Set the volume level to 0 dB using this unit's VOLUME control. A

2 Set the volume control of the receiver (or amplifier) to the position normally used for enjoying the source.

If the test signal, described below in "Speaker output adjustment", is too soft, adjust the volume on the receiver (or amplifier).

Note

If the input level to the receiver (or amplifier) is too loud, lower the volume level using this unit's VOLUME control.

When this unit is connected to three standard stereo amplifiers:

1 Set the volume level to around –48 dB using this unit's VOLUME control. B

(If this unit is connected to three integrated amplifiers:)

2 Set the volume control of the integrated amplifiers to the position normally used for enjoying the source.

If the test signal, described below in "Speaker output adjustment", is too soft or too loud, adjust the volume on this unit.

Adjust the output level of each speaker Remote control only

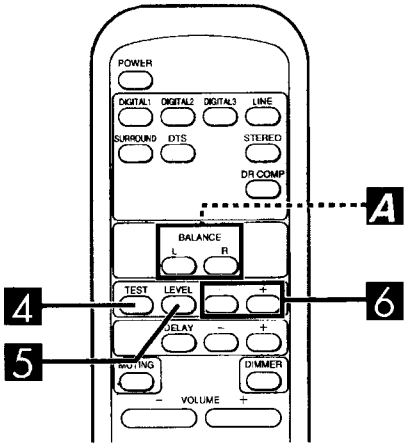
Use the test signal to adjust the output level of the center speaker, surround speakers and subwoofer.

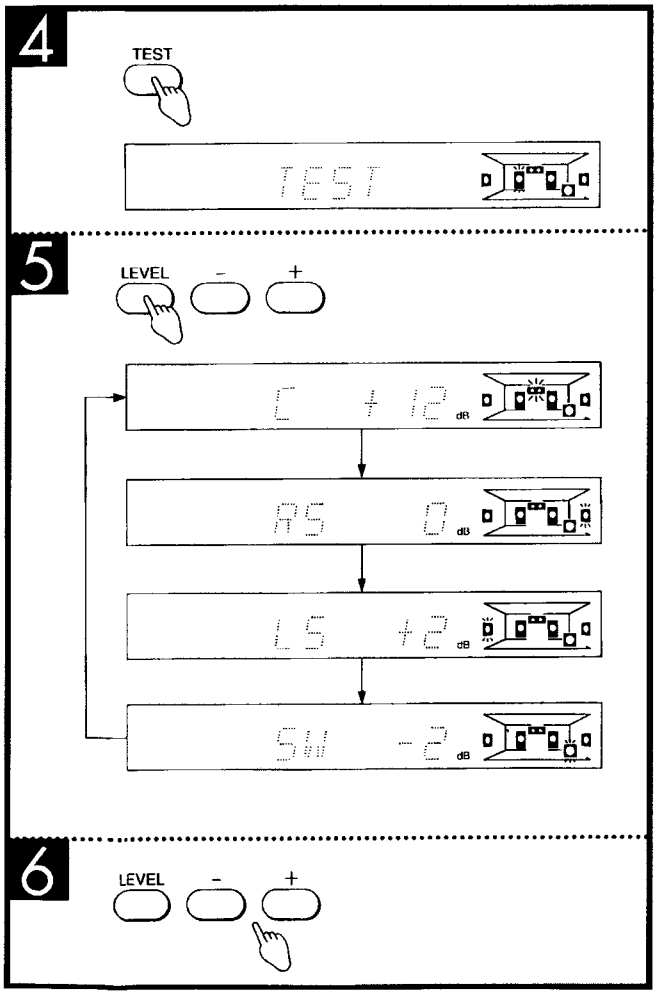
Note

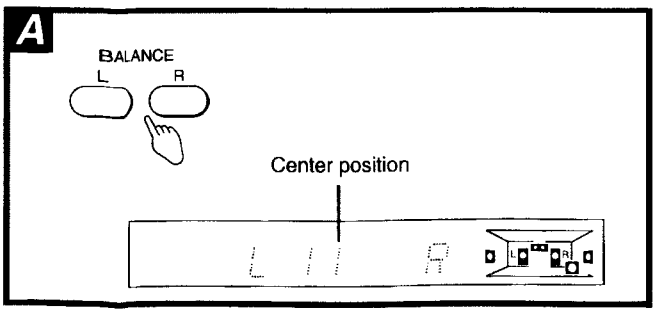
If the output from the front speakers is unbalanced, make balance adjustments on the receiver or amplifier before continuing with the following. (Refer to the instruction manual of the component.)
If the receiver or amplifier cannot be used to make balance adjustments, they can be made on this unit.

3 Press SURROUND to select the surround mode.
"SURROUND" appears on the display.

(Continued on next page)







4 Press TEST to output the test signal.

"TEST" appears on the display, and the speaker indicator corresponding to the speaker whose outputting sound flashes.
The test signal is automatically output from each speaker for 2 seconds in the following sequence:

L → C → R → RS → LS → SW

L: Front speaker (left)
C: Center speaker
R: Front speaker (right)
RS: Surround speaker (right)
LS: Surround speaker (left)
SW: Subwoofer
(Speakers for which NONE or NO has been set are skipped.)

Note

If the left and right front speaker balance is poor, do not proceed with the next step until balance has been improved with the procedure described below (**A**).

5 Press LEVEL to select the speaker channel to adjust.

The output level appears on the display, and the speaker indicator for the selected speaker flashes.

Each time the button is subsequently pressed, the speaker whose level is to be set is selected in the listed sequence.
(Speakers for which NONE or NO has been set are skipped.)

6 Press LEVEL [–] or [+] to adjust the output level.

Channels C, RS, LS, and SW can be adjusted between –12 dB and +12 dB. Set them so that the output from each channel appears to be the same as that from the front speakers.

7 Repeat steps 5 and 6 to adjust the output of each channel to approximately the same apparent level.

To stop the test signal

Press TEST.

Using this unit to adjust the balance of the left and right front speakers A

Make the adjustments while listening to the test signal put out in step 4 above.

Press BALANCE [L] or [R] on the remote control to adjust the level balance.

The left/right balance appears on the display.

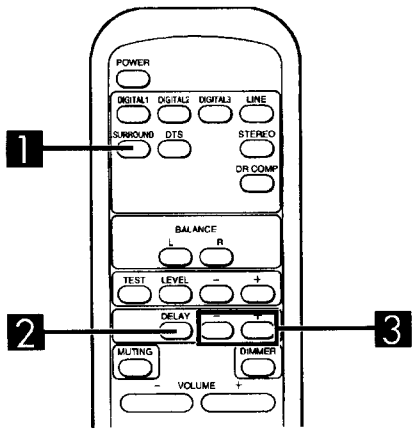
Each time the button is subsequently pressed, the output level of the front speaker opposite to the button pressed is decreased. (i.e. when the L button is pressed, the output level of the R speaker is decreased.)

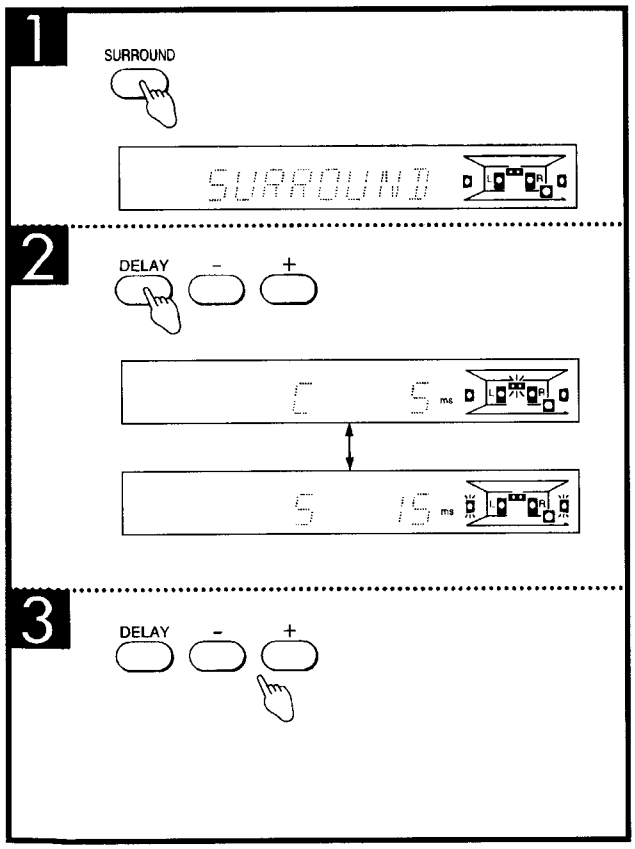
The original display is restored if a button isn't pressed for 4 or more seconds.

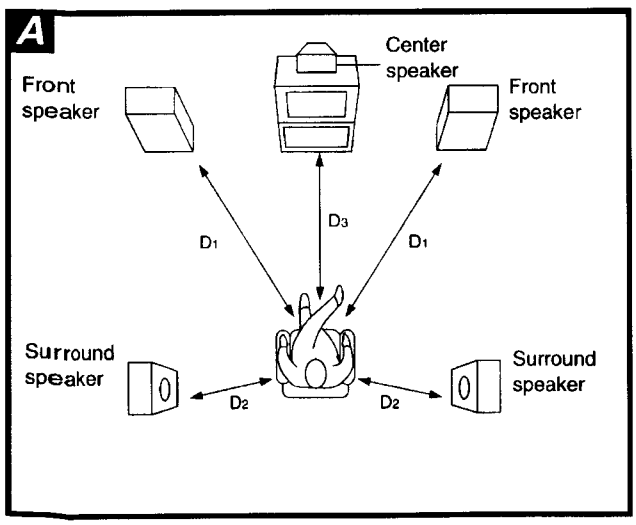
Note

The balance of the surround speakers cannot be adjusted using the BALANCE buttons.

■ Delay time adjustments







By adjusting the delay time, the difference in the distance from the viewing and listening position to the front speakers and the distance to the center speaker and surround speakers can be offset and made equal. This achieves better sound localization and makes a more life-like reproduction of the sound field possible.

Remote control only

1 Press SURROUND to select the surround mode.

"SURROUND" appears on the display.

2 Press DELAY to select the channel to be adjusted.

Each time the button is subsequently pressed, the channel whose delay time is to be set is selected alternately:
C (Center speaker) ⟷ S (Surround speakers)

For each channel, the delay time is displayed, and the speaker indicator for the corresponding speaker flashes.
The display is restored if a button isn't pressed for 4 or more seconds.

Note

Speakers for which NONE has been set are skipped.

3 Press [–] or [+] to set the delay time.

When the button is pressed, the current delay time is displayed. Each time the button is pressed, the delay time will change. The delay time increments are different depending on the speaker as follows.

Speaker	Available delay time setting (ms)
Center	0, 1, 2, 3, 4, 5
Surround	0, 5, 10, 15

Note

Please note the following if delay time is adjusted while playing back a source:
Adjustment is not possible if the source is DTS format.
While the ⧈ PRO LOGIC indicator is alight, the center channel cannot be adjusted and 15 ms are added to the delay times listed for the surround channel when displayed.

To calculate the delay time A

D_1: Distance from front speaker
D_2: Distance from surround speaker
D_3: Distance from center speaker

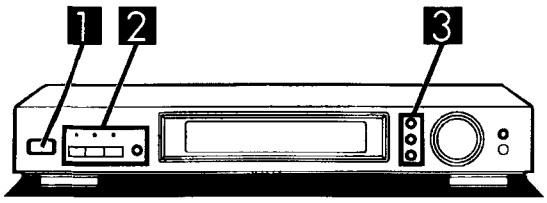
Setting the center channel delay time:

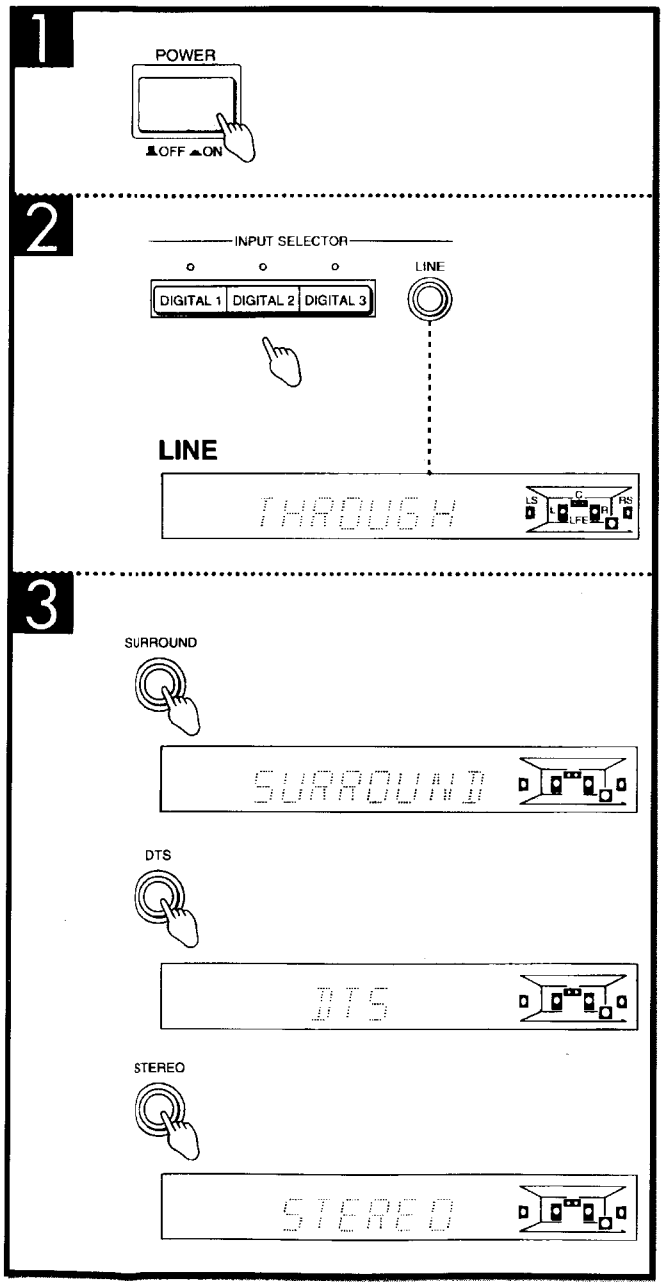
If D_1 is equal to or less than D_3	Set to 0 ms
If D_3 less than D_1	Increase 1 ms for every 30 cm (1 feet) of difference between D_1 and D_3

Setting the surround channel delay time:

If D_1 is equal to or less than D_2	Set to 0 ms
If D_2 is less than D_1	Start at 0 ms and increase by 5 ms for every 1.5 m (5 feet) of difference between D_1 and D_2

■ Enjoying sound in a variety of reproduction modes





This unit enables sound to be enjoyed in three reproduction modes – SURROUND, DTS and STEREO.

1 **Press POWER.**
Turn on the power to the other AV components as well.

2 **Press one of the input select buttons to select the input source.**
The indicator above the pressed button now lights.

DIGITAL 1: Selects the source connected to the DIGITAL 1 terminal. The unit automatically recognizes whether the source is connected through the optical fiber cable or the coaxial cable.

Note

If both types are connected at the same time, only the coaxial cable is recognized. Disconnect the coaxial cable if the external unit is connected with the optical fiber cable.

DIGITAL 2: Selects the source connected to this terminal.
DIGITAL 3: Selects the source connected to this terminal.
LINE: Selects the source connected to the LINE terminal. If a control amp has been connected to the LINE terminal, select the input source on it as well.

When DIGITAL 1, 2 or 3 has been selected:
The reproduction modes in step 3 can be selected.
When LINE has been selected:
The analog sound signals input through LINE IN terminals are directy output to the left and right front speakers via the connected component. "THROUGH" appears on the display.

Note

Only the POWER button and select buttons function when LINE has been selected.

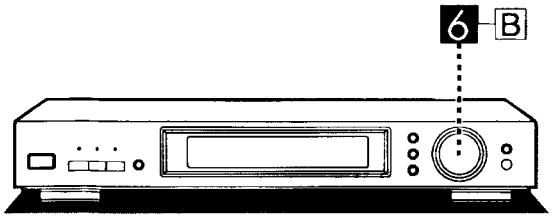
3 **Press SURROUND, DTS or STEREO to select the reproduction mode.**
The selected reproduction mode appears on the display (➡ see the previous page for descriptions of the modes.)

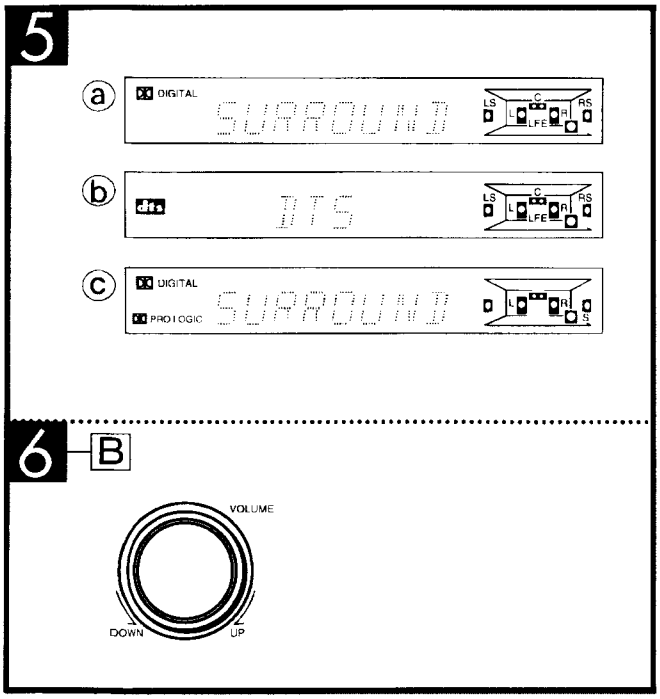
4 (When this unit is connected to a receiver (or amplifier) that 6 channel discrete input terminals:)
Set the receiver (or amplifier) to the 6 channel discrete input mode.

Note

If this unit is connected to three integrated amplifiers, set the input selector on the amplifiers to the connected input terminal such as the "AUX" terminals.
(Refer to the instruction manuals of the components.)

(Continued on next page)





5 Start playing the sound source.

The surround indicators

ⓐ DIGITAL: Lights if the source is Dolby Digital Format.
ⓑ dts: Lights if the source is DTS format.
ⓒ PRO LOGIC: Lights when Dolby Surround parts of Dolby Digital format software are played back, or when playing audio CDs in the SURROUND mode.

Note

- Only Dolby Digital, DTS or PCM signals ※ can be reproduced.
  The digital input signal of sampling frequencies 96 kHz and other signal formats such as MPEG cannnot be reproduced on this unit.
- When playback is started, the sound may be cut or interrupted before the input source is confirmed as Dolby Digital or DTS.

※ **PCM signal:** This refers to the recording format of signals (44.1 kHz, linear 16 bits) used for audio CDs

6 Adjust the volume.

Set the volume on the receiver (or amplifier) and this unit to the initial level. Any subsequent volume adjustments should be done as follows.

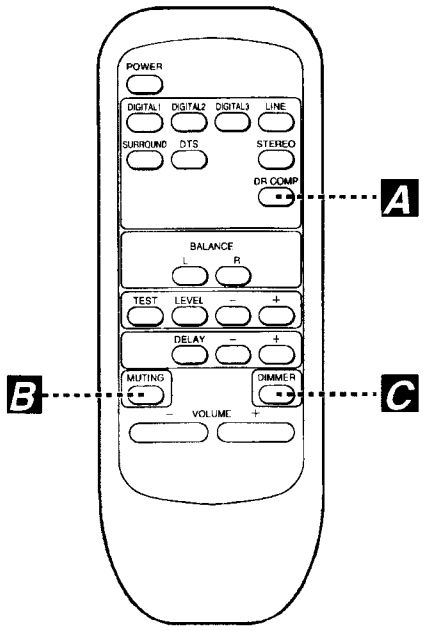
[A] (When this unit is connected to a receiver (or amplifier) that has 6 channel discrete input terminals:)
Adjust the volume using the volume control on the receiver (or amplifier).
If input to the receiver (or amplifier) is excessive, reduce the volume on this unit slightly.

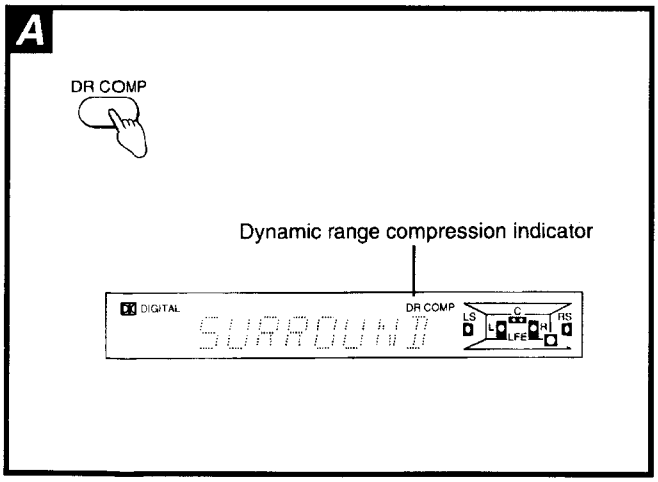
[B] (When this unit is connected to three standard stereo amplifiers or three integrated amplifiers:)
Adjust the volume using this unit's VOLUME control.
To adjust the volume of the components connected to the stereo control amplifier, use the volume control on the stereo control amplifier.

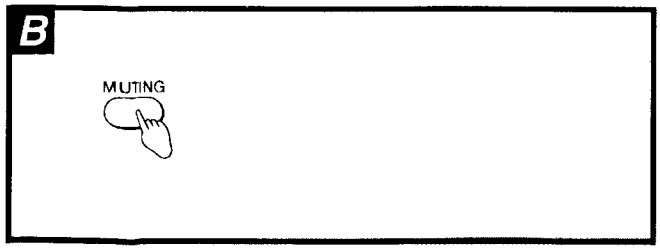
After use

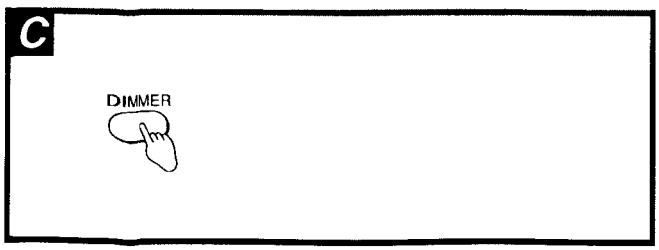
Reduce the volume on the component you are using to control the volume (the receiver, amplifier or this unit) to the minimum level, then turn off the power to this unit and the other components.

■ Other functions









Setting the midnight mode (dynamic range compression)

"Dynamic range compression" (DR COMP) is a function for compressing the dynamic range (reproduction level range) of audio signals. It is used for viewing movie software late at night or at other times when high volume levels are not desirable.

This function only works with DR COMP compatible Dolby Digital format software.

Remote control only

Press DR COMP. A

The "DR COMP" indicator lights.
When the button is pressed again, the function is released, and the indicator goes off.

For your reference:

When DR COMP is on, scenes that already have a low sound level will be heard as they are. When scenes that are loud occur, the function acts to reduce the peak level.
The sound field will remain intact even if DR COMP is functioning.

Muting the sound temporarily

Remote control only

Press MUTING. B

During muting, the message "MUTING ON NOW" scrolls across the display.
When the button is pressed again, the original volume level is restored. When the unit's power is switched off, muting is canceled.

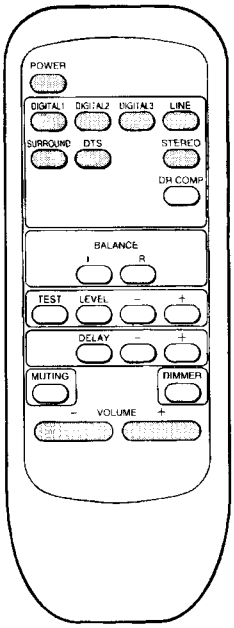
Selecting the display panel brightness

Remote control only

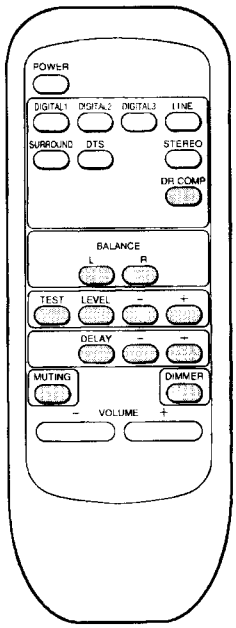
Press DIMMER. C

The display panel is dimmed.
When the button is pressed again, or when the unit's power is switched off, the original brightness is restored.

■ Remote control quick reference



Functions which are also available from the main unit	
To turn the unit ON/OFF	POWER
Selecting the input source	DIGITAL 1 DIGITAL 2 DIGITAL 3 LINE
Selecting the SURROUND reproduction mode	SURROUND
Selecting the DTS reproduction mode	DTS
Selecting the STEREO reproduction mode	STEREO
Adjusting the volume	– VOLUME +



Functions which are only available from the remote control	
To turn on the midnight mode	DR COMP
Adjusting the volume balance between the left and right front speakers	BALANCE L R
Outputting the test signal to adjust the output level of each speaker	TEST
Selecting the speaker channel and adjusting its output level	LEVEL → – +
Selecting the speaker channel and adjusting its delay time	DELAY → – +
Muting the sound temporarily	MUTING
Selecting the display panel brightness	DIMMER

■ Operation Checks

"ATTENTION SERVICER" Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**

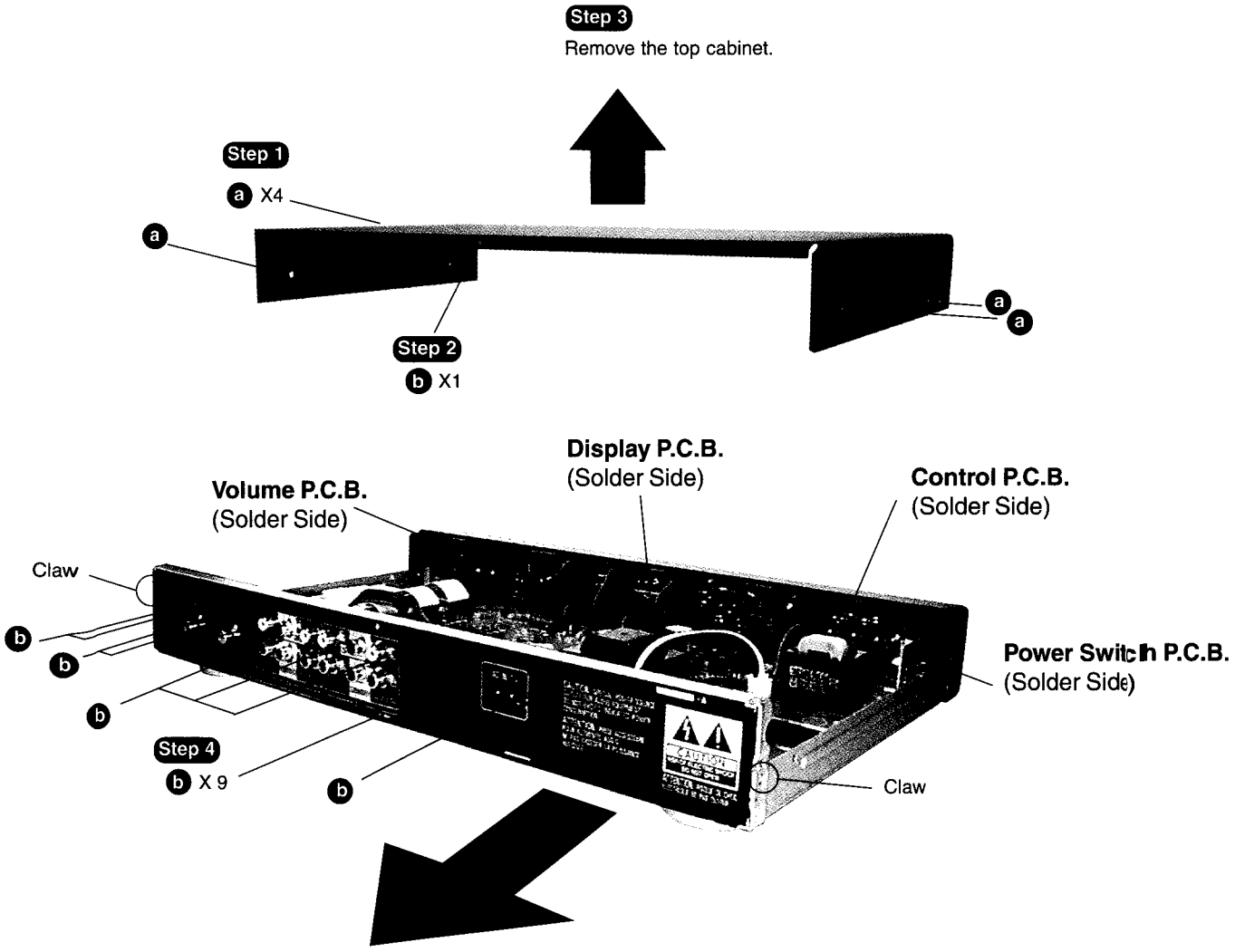
• Contents

page

• **Checking Procedure For Each Major P.C.B.** ..... 16 ~ 17

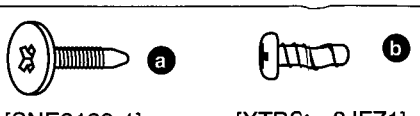
■ Checking Procedure For Each Major P.C.B.

1. Checking of the Control, Display, Volume and Power Switch P.C.B.



Step 5

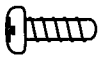
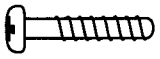
Release the two rear claw and pull out the back panel

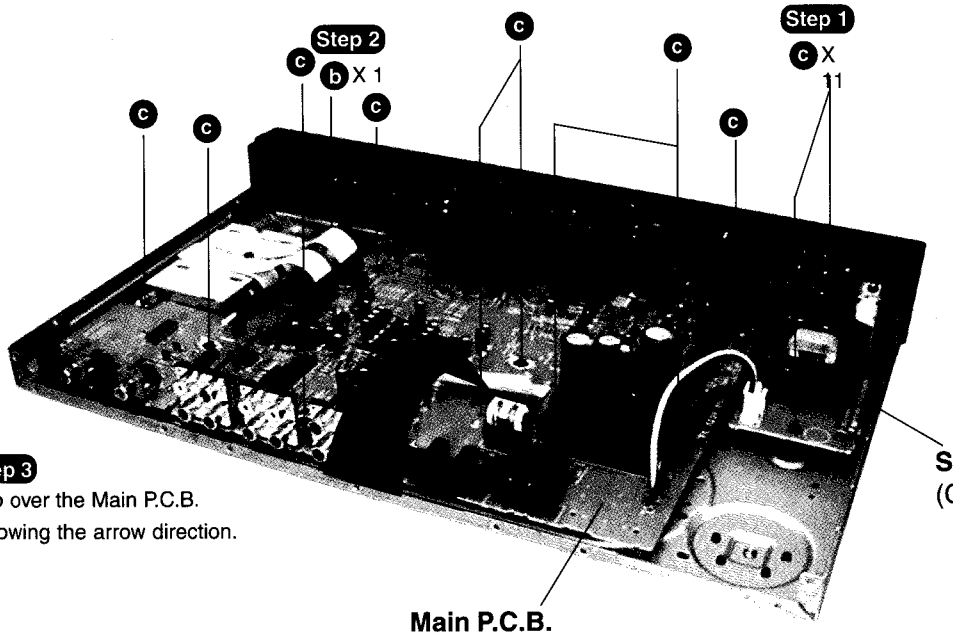


[SNE2129-1] (Black)

[XTBS4+8JFZ1] (Black)

2. Checking of the AC-3 Module Unit, Display, Sub-Transformer, Digital Input and Main P.C.B.

	b	[XTBS3+8JFZ1] (Black)
	c	[XTB3+20JFZ] (Black)



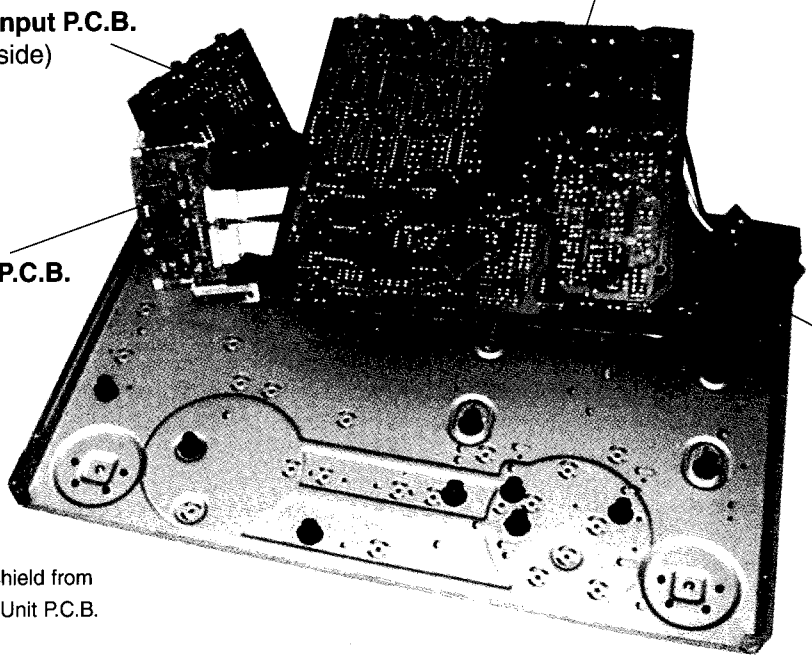
Step 3
Flip over the Main P.C.B.
following the arrow direction.

Sub-Transformer P.C.B.
(Component side)

Main P.C.B.
(Component side)

Main P.C.B.
(Solder side)

Digital Input P.C.B.
(Solder side)



AC-3 Module Unit P.C.B.
(Solder side)

Sub-Transformer P.C.B.
(Solder side)

Step 4
Remove the shield from
AC-3 Module Unit P.C.B.

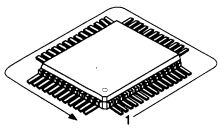
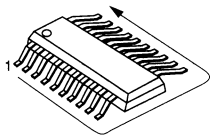
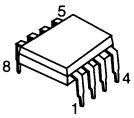
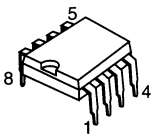
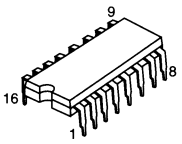
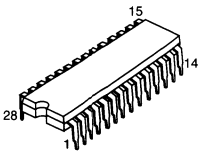
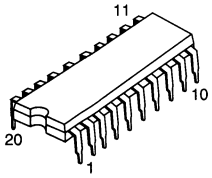
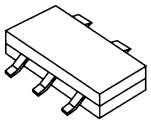
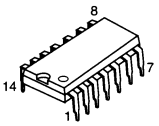
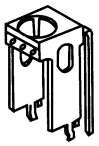
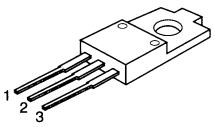
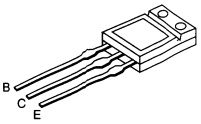
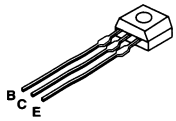
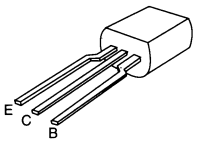
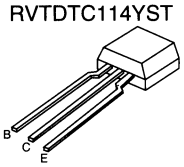
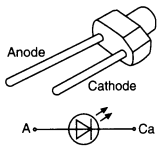
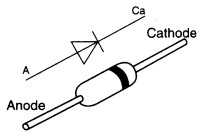
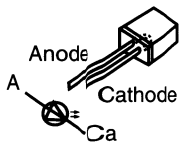
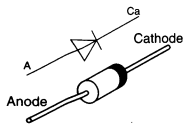
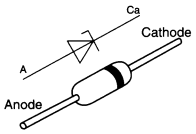
■ Terminal Functions Of ICs

• IC901 (M38B53M4057F) System Microprocessor

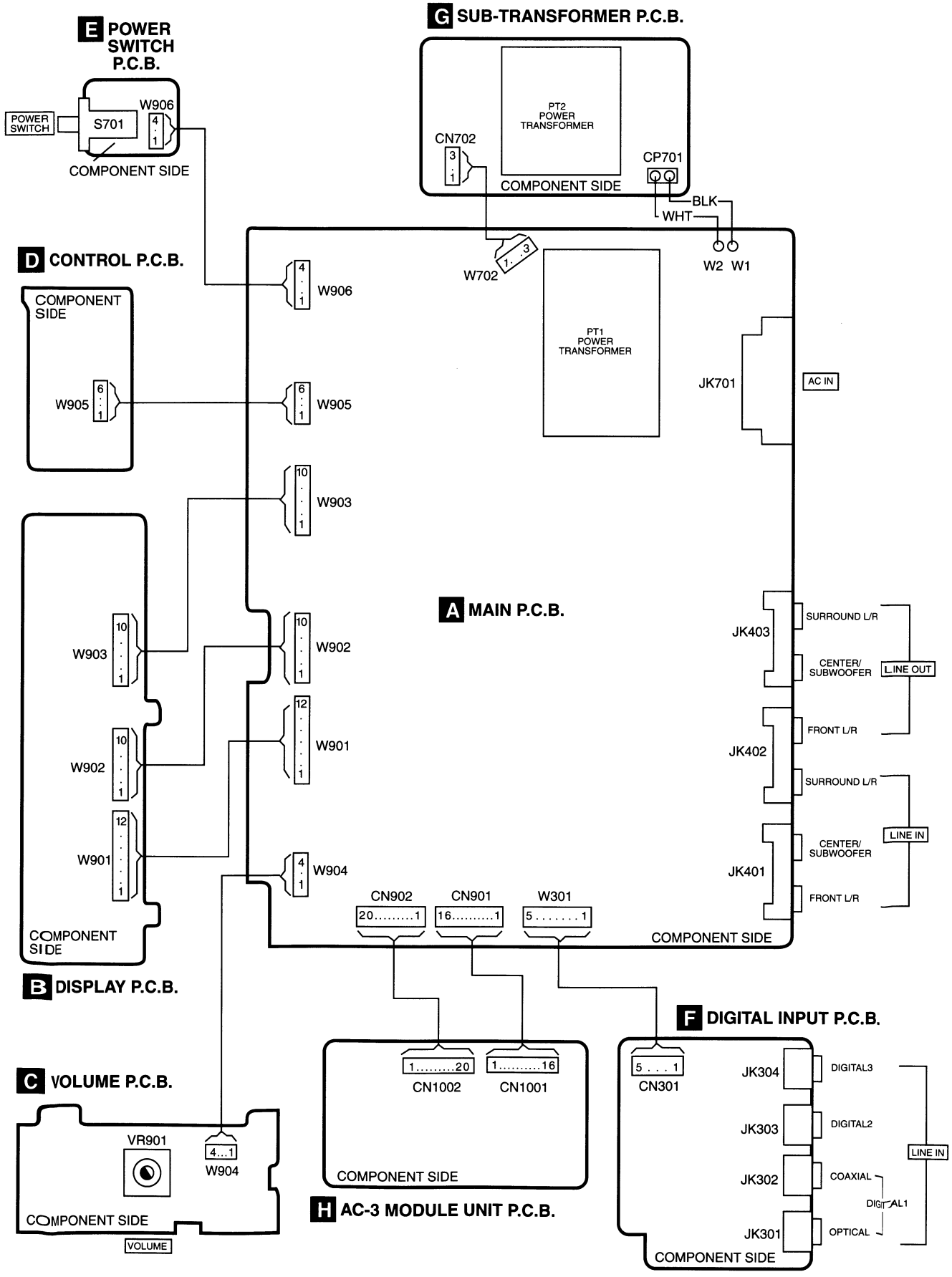
Pin No.	Mark	I/O	Function
1	XCS	O	Key Input 1 ~ 2
2	SK	O	Thermal/Over load input 1
3	DI	O	Key Input 4
4	DO	I	Thermal/Over load input 2
5~6	STB1~STB2	O	Stereo signal detect terminal
7~8	RA~RB	I	Wake up timer LED
9	--	I	Control of RDS IC (ST) stereo signal
10	RESET	I	Remote control terminal
11	CK	O	Reset detect terminal
12	DATA	O	Control of RDS IC (CK) clock signal
13	VSS	–	Control of RDS IC (DT) data signal
14	XIN	--	GND terminal
15	XOUT	--	Crystal oscillator terminal (4 MHz)
16	VDD/VCC	--	Crystal oscillator terminal (4 MHz)
17~18	DIGITAL1~2	O	LED driver IC (DT) data signal
19	LINE	O	SFC mode encoder input 1
20	STANDBY	O	SFC mode encoder input 2
21	POWERSW	I	Selector encoder for input 1
22	REMOTE	I	Blackout detection terminal
23	HOLD	I	Selector encoder for input 2
24	POWER	O	VCR2 control input
25~27	A4053A~C	O	6 ch sw control output (ST)
28	VEE	--	Power supply for FL driver
29~30	MUTEA / S	O	Speaker B control output
31~40	DIG10~DIG1	O	Muting control output

Pin No.	Mark	I/O	Function
41~56	SEG1~SEG16	O	FL digit signal output
57	INIT	I	Diode input initial settings
58	–	I	Volume control output (Down)
59	PDN	O	Volume control output (Up)
60	OVLERR	I	REC Mute control
61	FRQ0	I	Serial data signal
62	FRQ1	I	Power limitter control output
63	AC3	I	Tuner control (CE) chip enable signal
64	AUDIO	I	Selector/Tuner (CK) clock signal
65	CCS	O	Selector/Tuner (DT) data signal
66	CCLK	O	Selector control terminal
67	CDIN	O	MMD control terminal
68	CDOUT	I	Surround control (CK) clock signal
69	SS	O	Surround control (DT) data signal
70	SCK	O	Surround control (CE) chip enable signal
71	MOSI	O	GND for A-D converter
72	MISO	O	Reference voltage for A-D converter
73	AVSS	–	SD signal detect input
74	VREF	–	Encoder of surround mode selector input1
75	MRESET	O	Help LED control output
76	IFCD	I	Encoder of surround mode selector input2
77	TCS	O	Video selector control output A
78	TRST	O	Video selector control output B
79	KEY1	A/D	Key input 1
80	KEY2	A/D	Key input 2

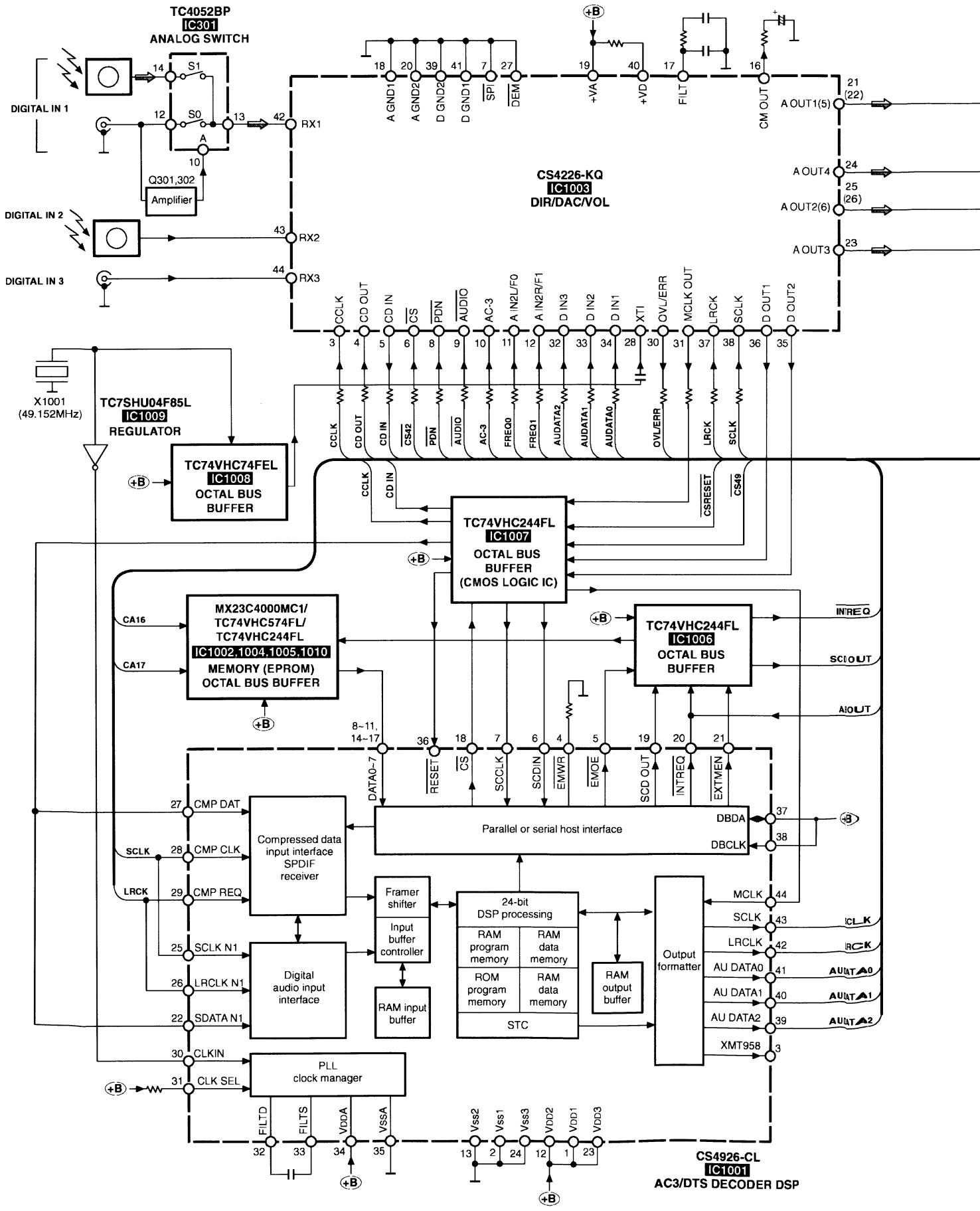
■ Type Illustration of IC's, Transistors and Diodes

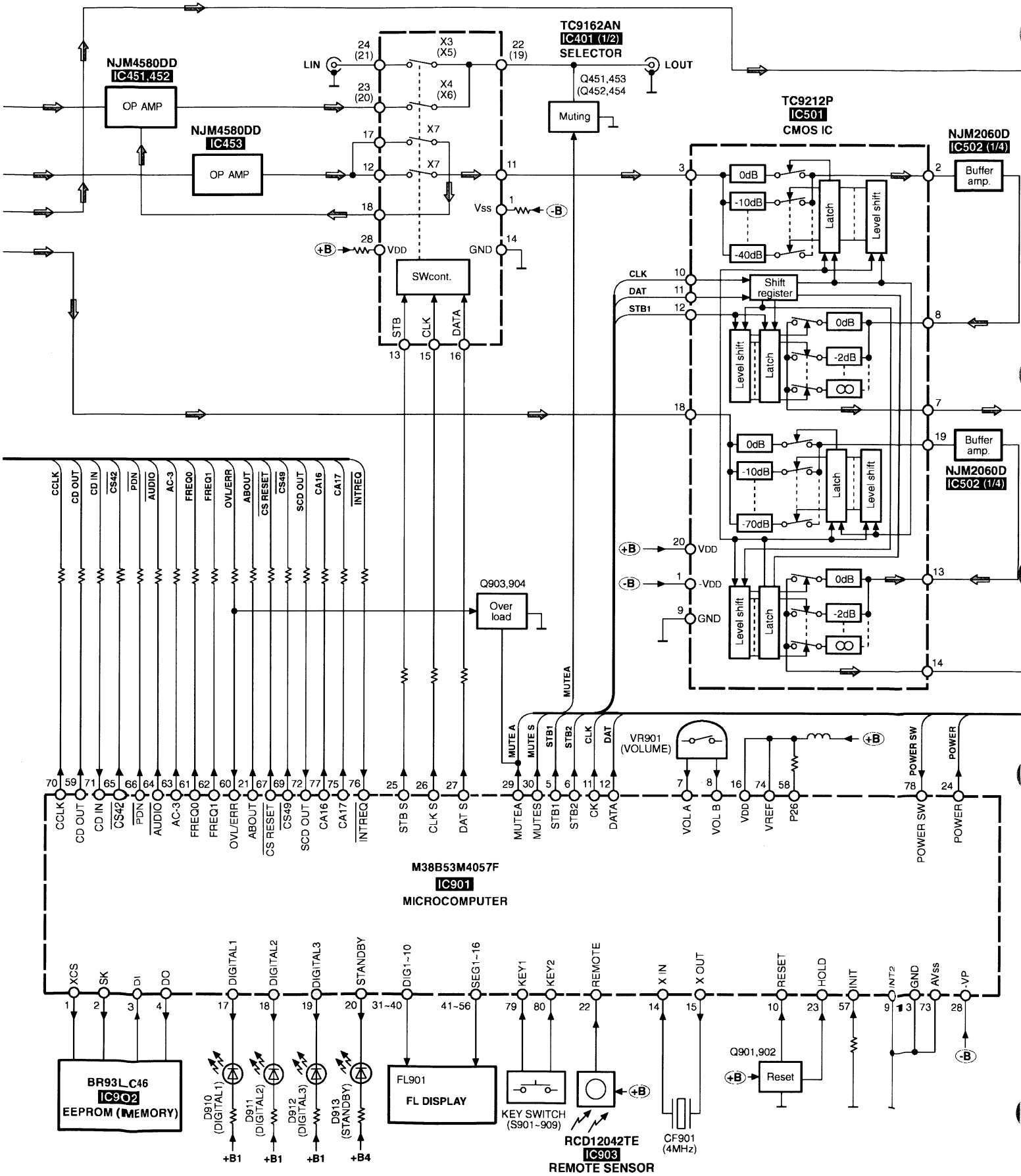
M38B53M4057F CS4926-CL CS4226-KQ 	MX23C4000MC1 	NJM4580DD 	BR93LC46 	TC9212P TC4052BP 	TC9162AN 
TC74VHC574FL TC74VHC244FL 	TC7SHU04F85L 	NJM2060D 	RCD12042TE 	BA033T 	2SD2137PQTA 
2SD1915FTA 2SD1450RSTTA 	2SD592AQSTA 2SA992FEPTA 2SB621AQSTA 	2SA933SSTA 2SC1740SSTA RVTDTA114YST RVTDTC114YST 	SLR325VCT31 	RVD1SS133TA 	LN846RPH 
RL1N4003N02 	MTZJ27DTA MTZJ13BTA MTZJ3R9ATA MTZJ4R7BTA MTZJ6R2ATA MTZJ6R2CTA 				

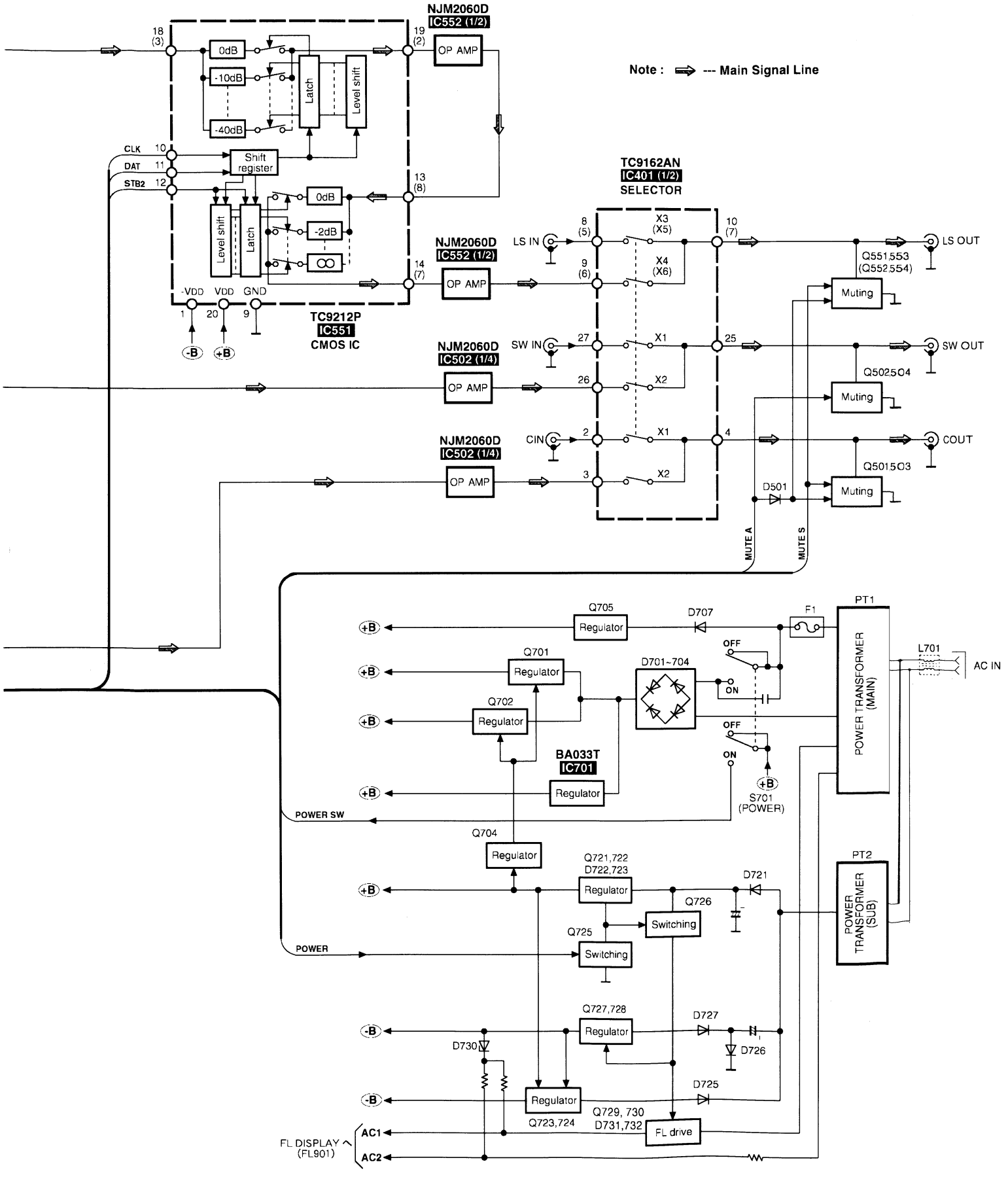
Wiring Connection Diagram



Block Diagram




NJM4580DD
IC451,452
OP AMP
NJM4580DD
IC453
OP AMP
LIN
LOUT
TC9162AN
IC401 (1/2)
SELECTOR
Q451,453
(Q452,454
Muting
X3
(X5)
X4
(X6)
X7
X7
SWcont.
STB
CLK
DATA
Vss
VDD
GND
TC9212P
IC501
CMOS IC
0dB
-10dB
-40dB
-2dB
-70dB
Latch
Level shift
Shift register
CLK
DAT
STB1
NJM2060D
IC502 (1/4)
Buffer amp.
VDD
-VDD
GND
Q903,904
Over load
MUTEA
MUTE A
MUTE S
STB1
STB2
CLK
DAT
VR901
(VOLUME)
POWER SW
POWER
CCLK
CD OUT
CD IN
CS42
PDN
AUDIO
AC-3
FREQ0
FREQ1
OVL/ERR
ABOUT
CS RESET
CS49
SCD OUT
CA16
CA17
INTREQ
STB S
CLK S
DAT S
MUTES
VOL A
VOL B
VDD
VREF
P26
M38B53M4057F
IC901
MICROCOMPUTER
XCS
SK
DI
DO
DIGITAL1
DIGITAL2
DIGITAL3
STANDBY
DIG1~10
SEG1~16
KEY1
KEY2
REMOTE
X IN
X OUT
RESET
HOLD
INIT
INT2
GND
AVss
-VP
BR93L_C46
IC902
EEPROM (MEMORY)
D910
(DIGITAL1)
D911
(DIGITAL2)
D912
(DIGITAL3)
D913
(STANDBY)
+B1
+B1
+B1
+B4
FL901
FL DISPLAY
KEY SWITCH
(S901~909)
RCD12042TE
IC903
REMOTE SENSOR
CF901
(4MHz)
Q901,902
Reset


NJM2060D
IC552 (1/2)
OP AMP
0dB
-10dB
-40dB
Latch
Level shift
Shift register
CLK
DAT
STB2
-2dB
∞
-VDD
VDD
GND
TC9212P
IC551
CMOS IC
-B
+B
Note : ⇒ --- Main Signal Line
TC9162AN
IC401 (1/2)
SELECTOR
LS IN
SW IN
CIN
X1
X2
X3 (X5)
X4 (X6)
LS OUT
SW OUT
COUT
Q551,553 (Q552,554)
Q502,504
Q501,503
Muting
D501
MUTE A
MUTE S
NJM2060D
IC502 (1/4)
Q705
Regulator
D707
F1
PT1
Q701
Q702
D701~704
OFF
ON
L701
AC IN
POWER TRANSFORMER (MAIN)
BA033T
IC701
S701 (POWER)
POWER SW
Q704
Q721,722
D722,723
D721
Q726
Switching
Q725
POWER
PT2
POWER TRANSFORMER (SUB)
Q727,728
D727
D726
D730
D725
Q723,724
Q729, 730
D731,732
FL drive
FL DISPLAY (FL901)
AC1
AC2

Schematic Diagram

		Page
A	MAIN CIRCUIT	26 ~ 27
B	DISPLAY CIRCUIT	25
C	VOLUME CIRCUIT	30
D	CONTROL CIRCUIT	30
E	POWER SWITCH CIRCUIT	30
F	DIGITAL INPUT CIRCUIT	30
G	SUB-TRANSFORMER CIRCUIT	27
H	AC-3 MODULE UNIT CIRCUIT	28 ~ 29

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

- **S701** : Power switch
- **S901** : Digital 1
- **S902** : Digital 2
- **S903** : Digital 3
- **S904** : Line switch
- **S905** : Surround switch
- **S906** : DTS switch
- **S907** : Stereo switch
- **S908** : Channel select switch
- **S909** : Speaker select switch
- **VR901** : Volume control

- **Signal line**

——— : +B line - - - - : - B line ⇨ : Main signal line

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.
  Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

- **Importance safety notice:**
  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

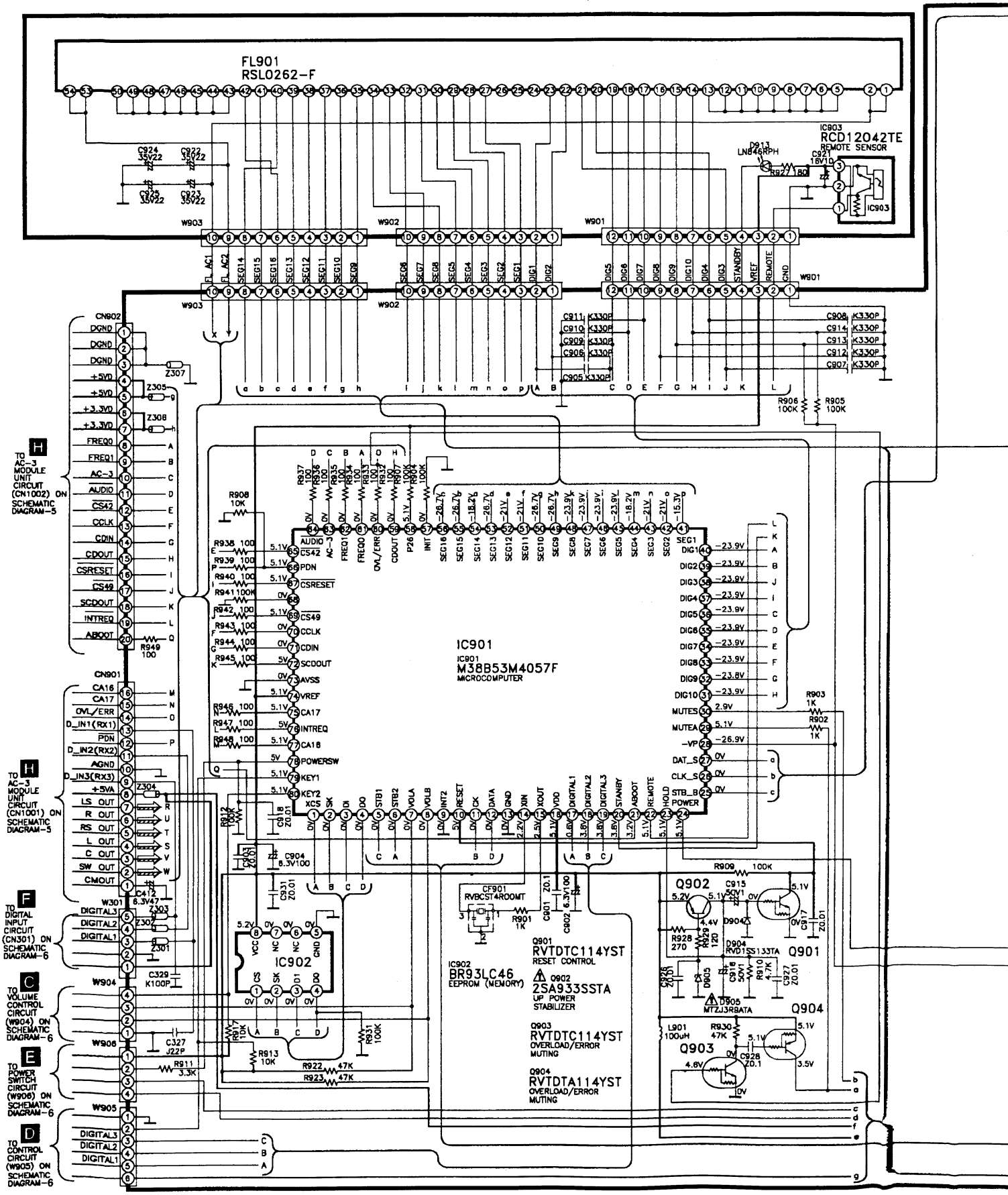
IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.
- Put a conductive mat on the work table.

SCHEMATIC DIAGRAM - 1

B DISPLAY CIRCUIT
(P.C.Board on page 35)

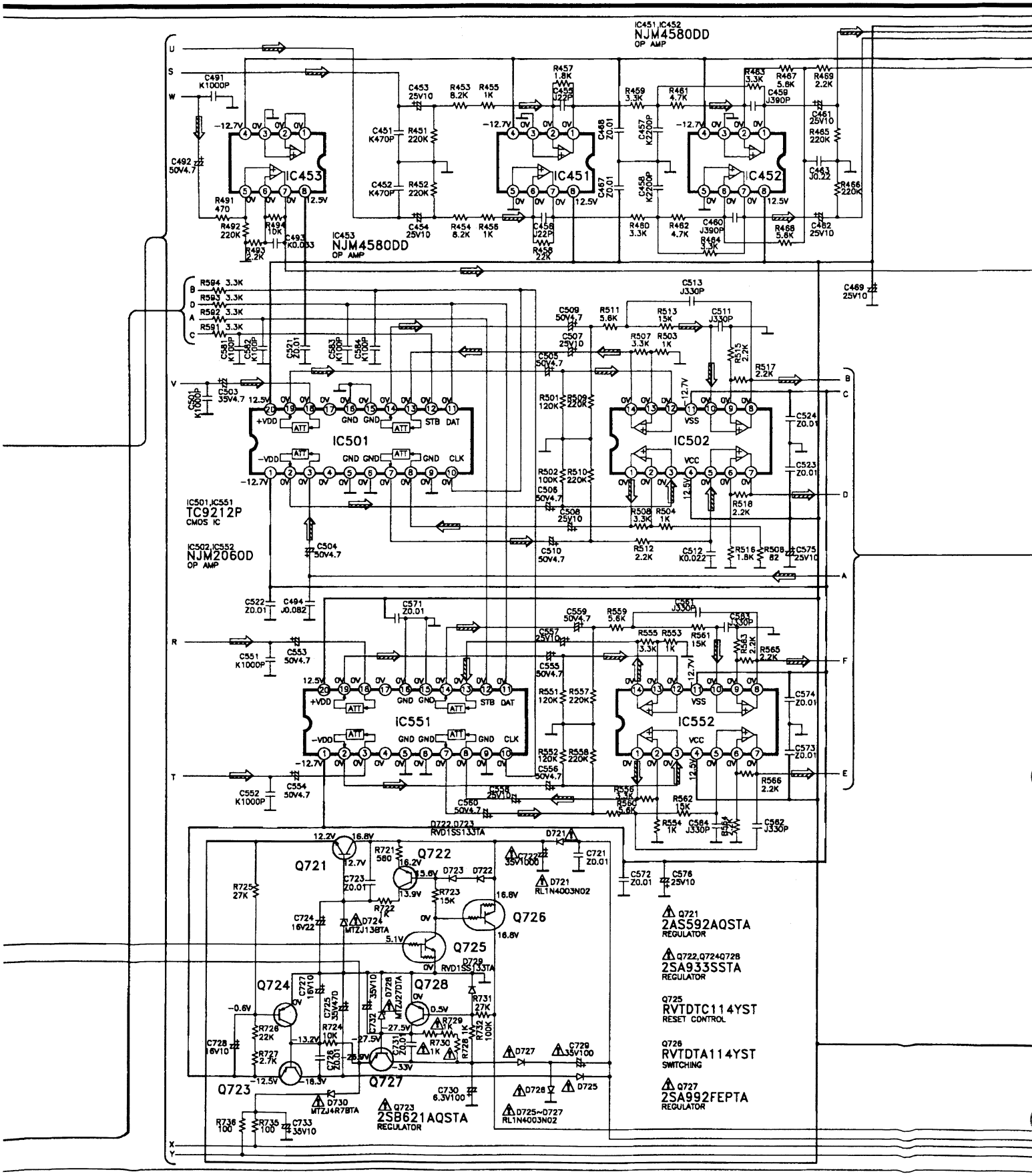
——— : +B Line　　– – – – : –B Line　　⇒ : Main Signal Line



SCHEMATIC DIAGRAM - 2

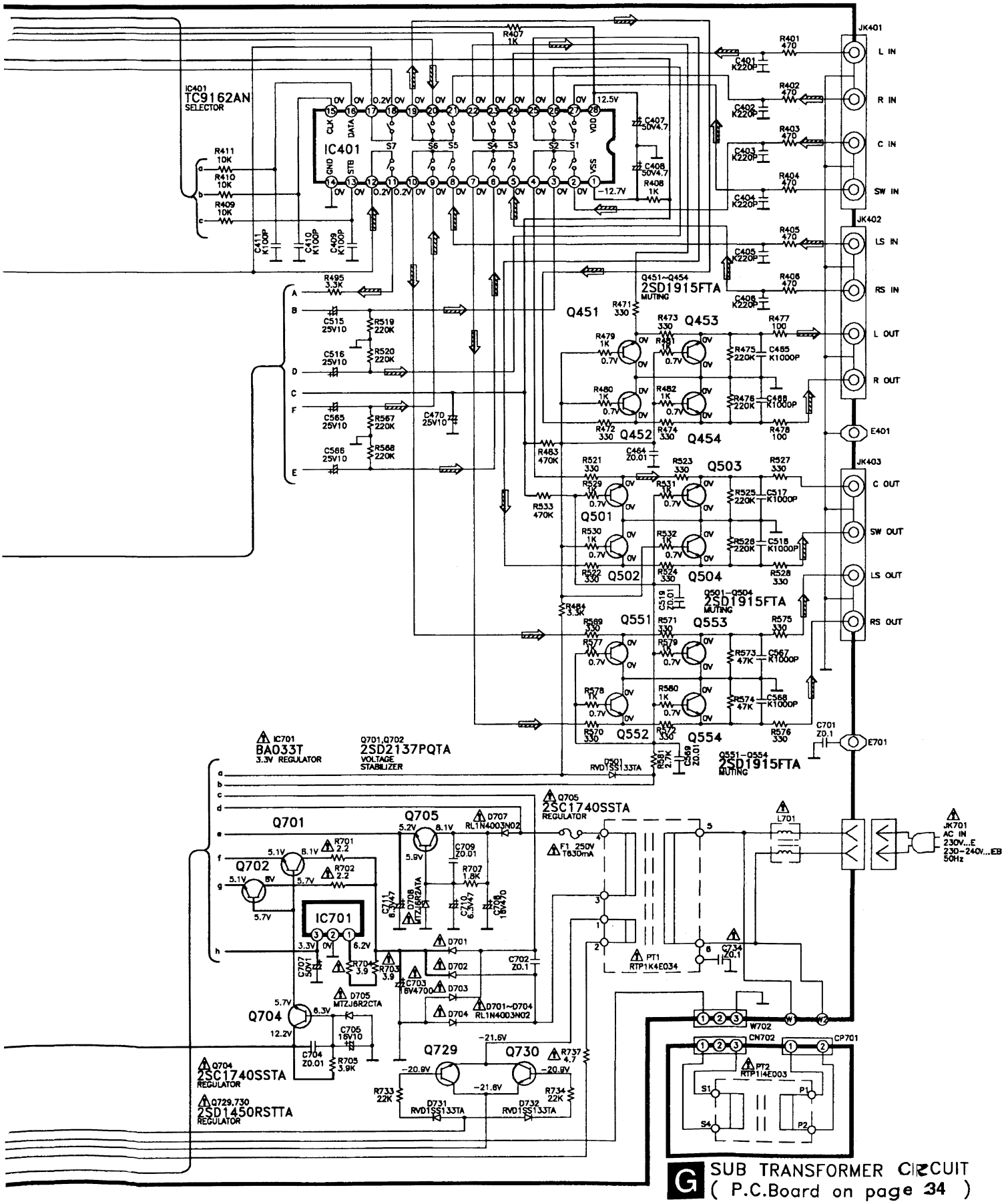
A MAIN CIRCUIT
(P.C.Board on page 32)

——— : +B Line　　– – – – : –B Line　　⇒ : Main Signal Line



SCHEMATIC DIAGRAM - 3

——— : +B Line – – – – : –B Line ⇨ : Main Signal Line



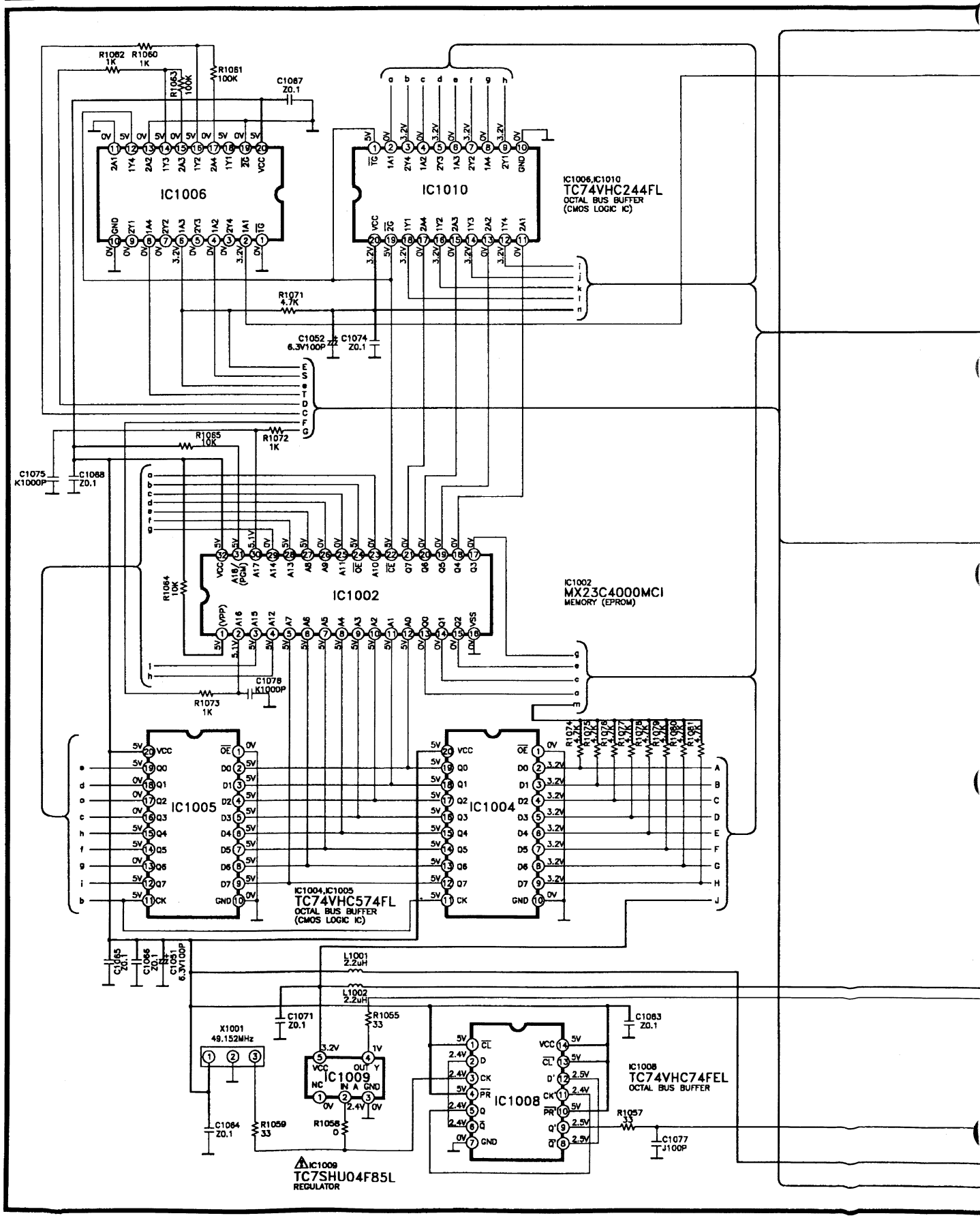
G SUB TRANSFORMER CIRCUIT (P.C.Board on page 34)

SCHEMATIC DIAGRAM - 4

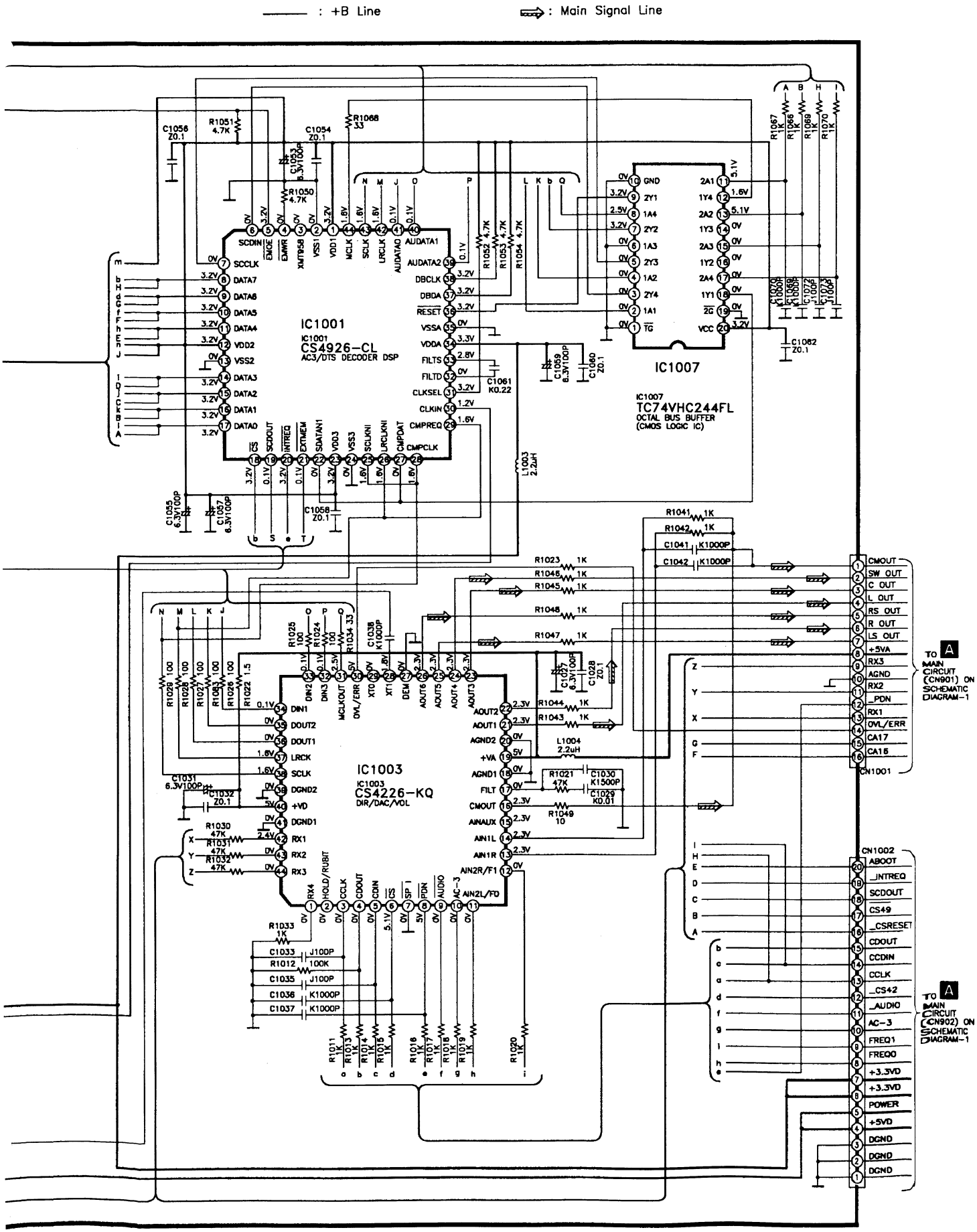
H AC-3 MODULE UNIT CIRCUIT

(P.C.Board on page 31)

——— : +B Line



SCHEMATIC DIAGRAM - 5

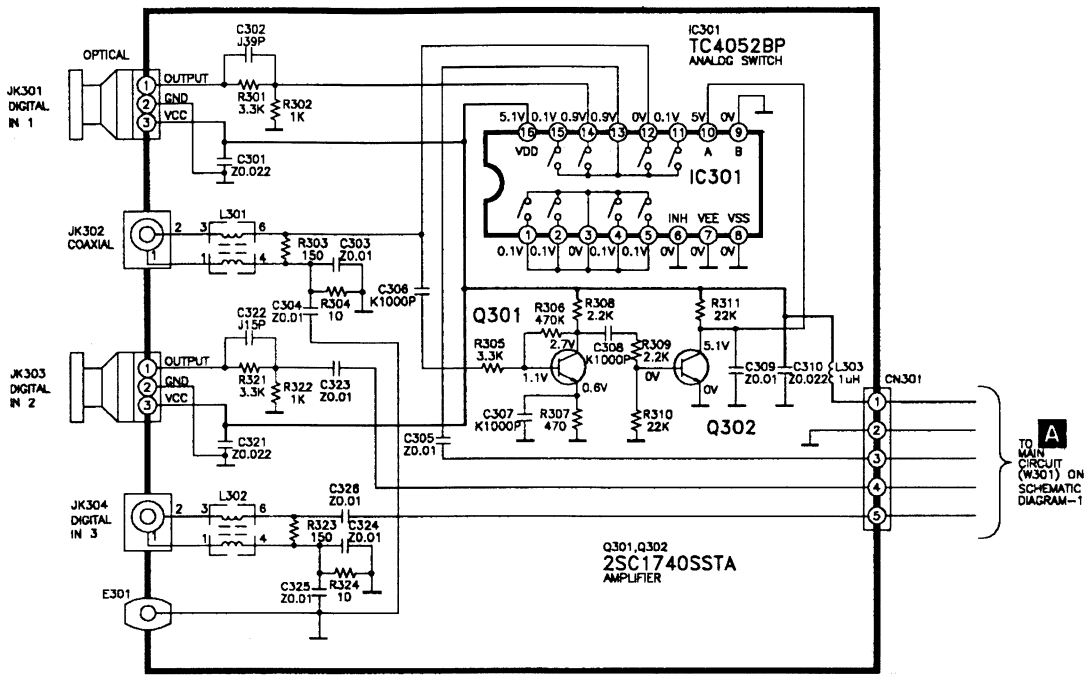


SCHEMATIC DIAGRAM - 6

F DIGITAL INPUT CUIRCUIT

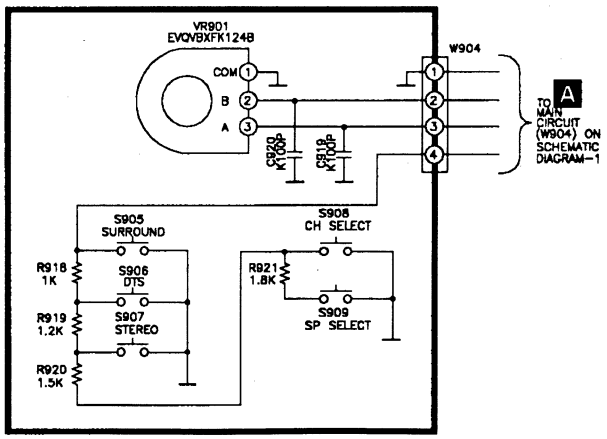
(P.C.Board on page 34)

——— : +B Line



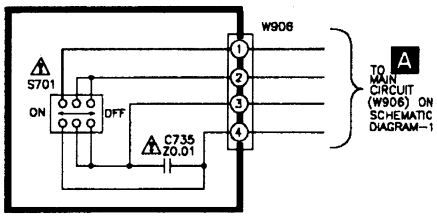
C VOLUME CONTROL CIRCUIT

(P.C.Board on page 35)



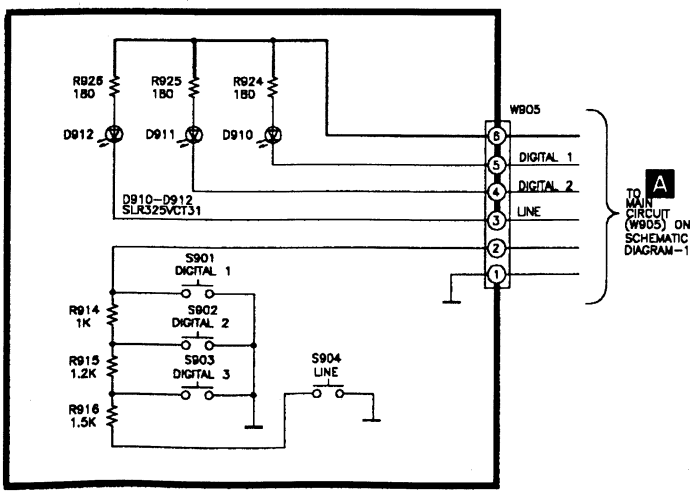
E POWER SWITCH CIRCUIT

(P.C.Board on page 34)



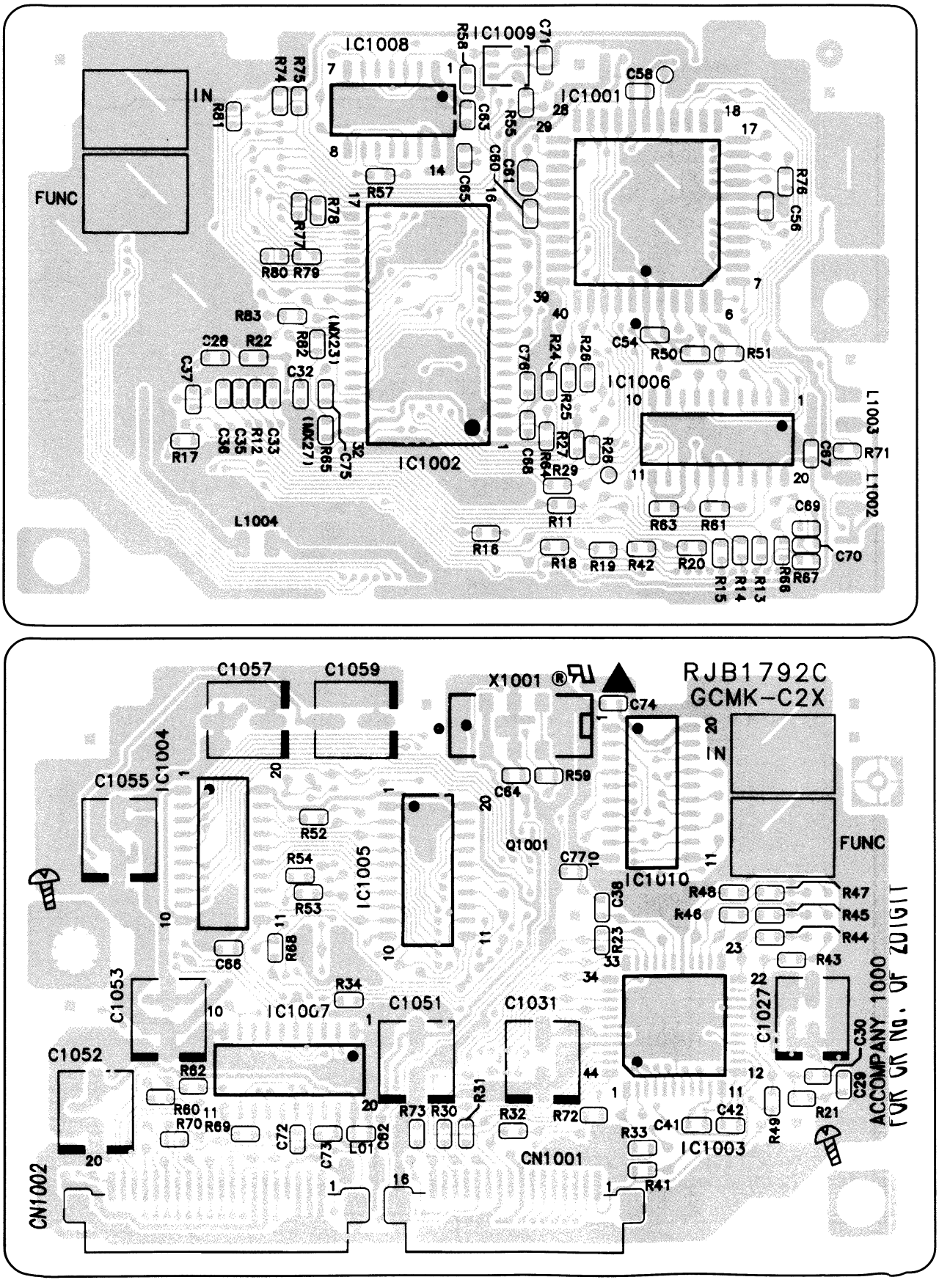
D CONTROL CIRCUIT

(P.C.Board on page 34)

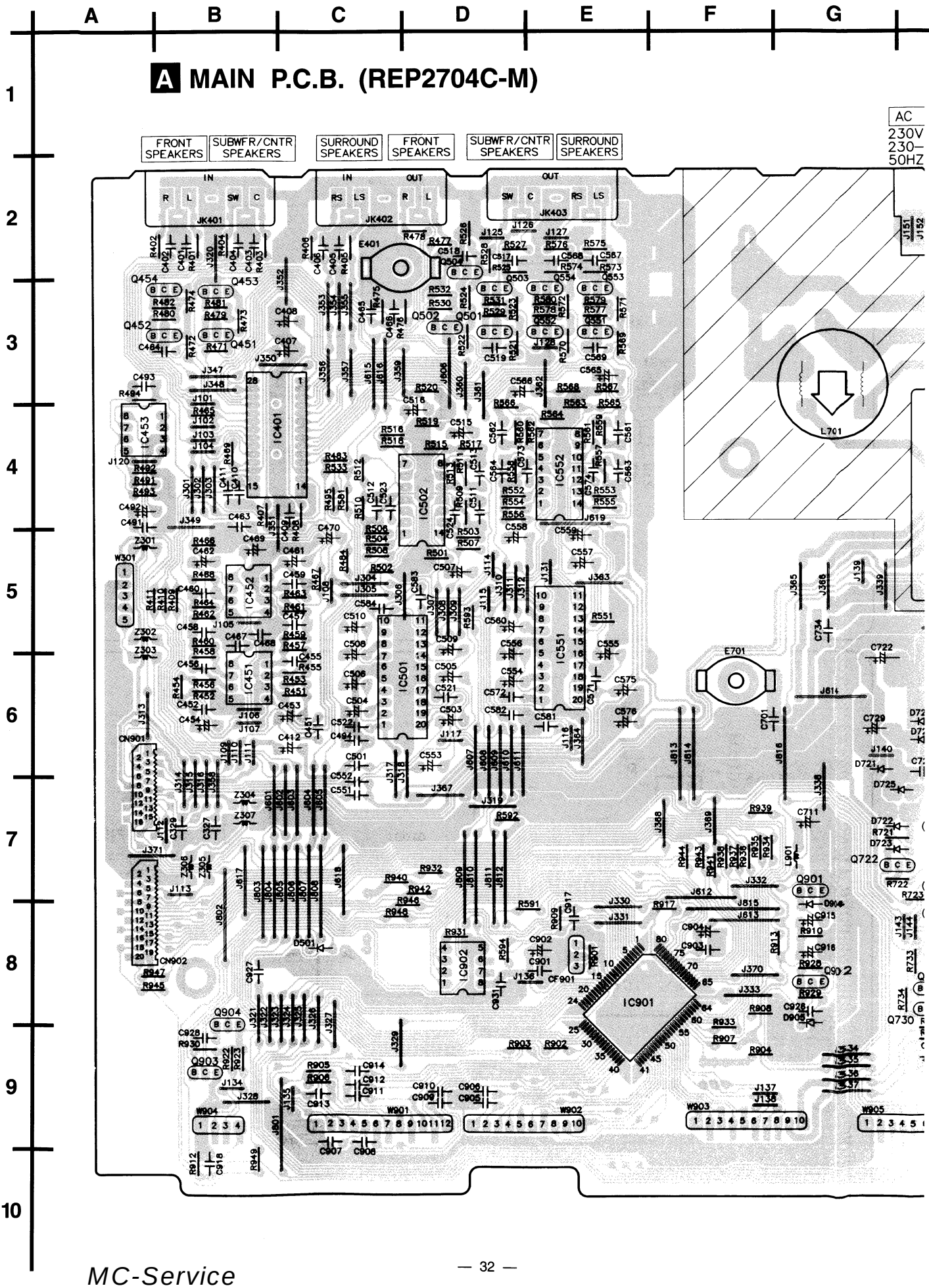


■ Printed Circuit Board (This printed circuit board diagram may be modified at any time with the developement of new technology.)

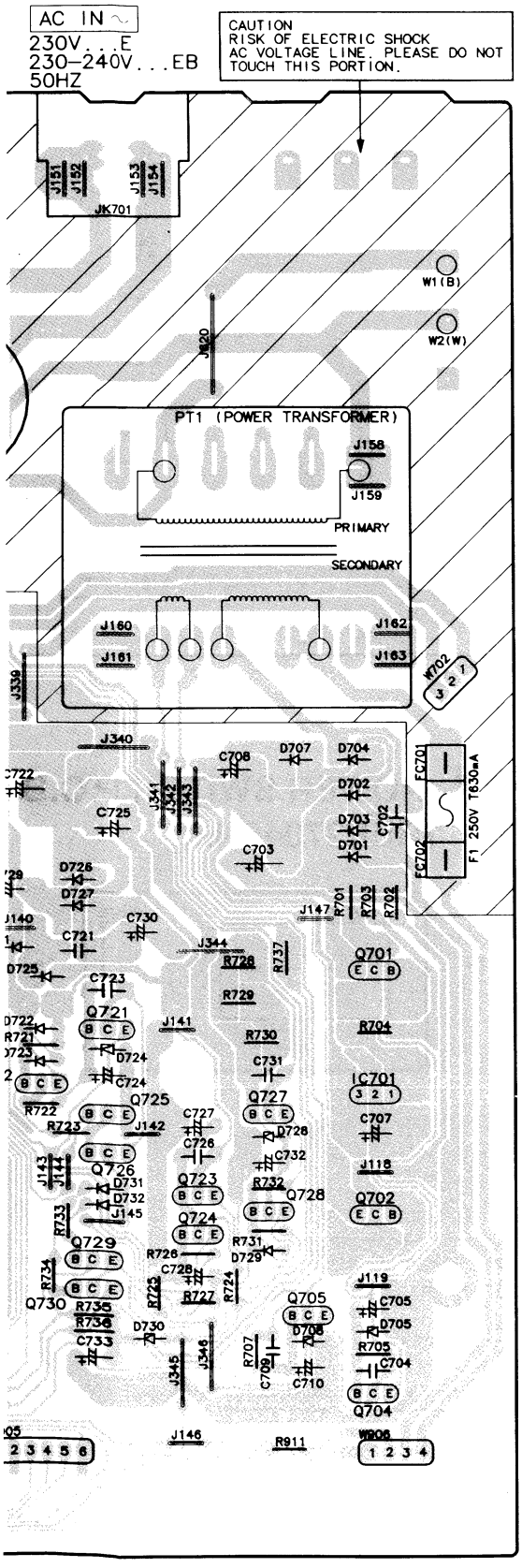
H AC-3 MODULE UNIT P.C.B. (REP2703A-T)



A MAIN P.C.B. (REP2704C-M)



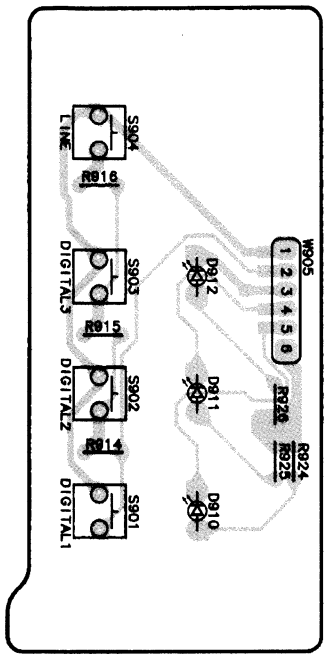
G H I J K L M N



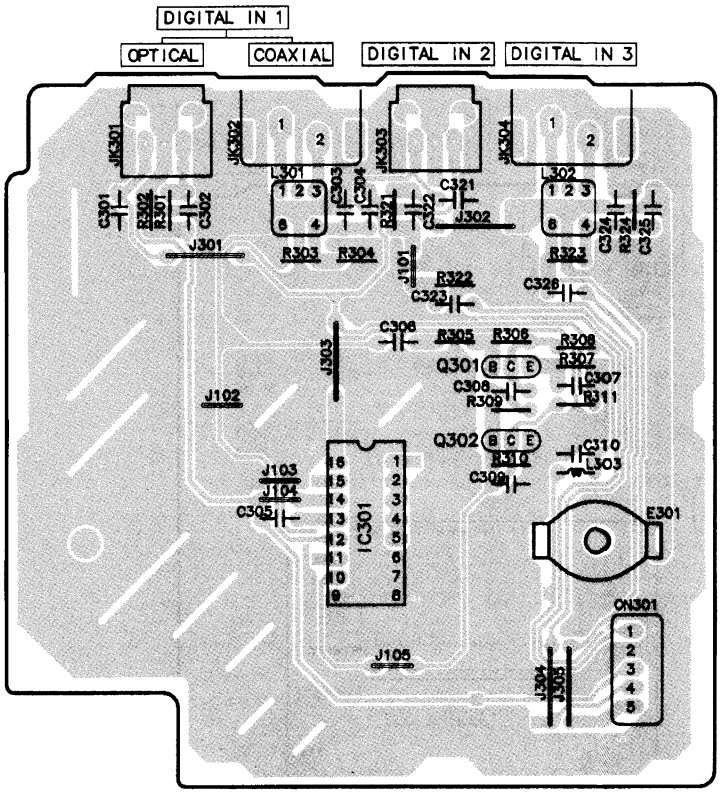
Parts Location Table

Ref No.	Loc. No.	Ref No.	Loc. No.
CF901	E8	Q501	D3
CN901	A6	Q502	D3
CN902	B8	Q503	D2
D701	I6	Q504	D2
D702	I6	Q551	E3
D703	I6	Q552	E3
D704	I5	Q553	E2
D705	I9	Q554	E2
D707	I5	Q701	I7
D721	G6	Q702	I8
D722	G7	Q704	I9
D723	G7	Q705	I9
D724	G7	Q721	H7
D725	G7	Q722	G7
D726	H6	Q723	H8
D727	H6	Q724	H8
D728	I8	Q725	H7
D729	I8	Q726	H8
D730	H9	Q727	I7
D731	H8	Q728	I8
D732	H8	Q729	H8
D904	G8	Q730	G9
D905	G9	Q901	G7
E401	C2	Q902	G8
E701	F6	Q903	B9
FC701	J6	Q904	B8
FC702	J6	W1	J3
IC401	B4	W2	J3
IC451	B6	W301	A5
IC452	B5	W702	J5
IC453	A4	W901	C9
IC501	C6	W902	E9
IC502	D4	W903	F9
IC551	E6	W904	B9
IC552	E4	W905	G9
IC701	I7	W906	I9
IC901	E8	Z301	A5
IC902	D8	Z302	A5
JK401	B2	Z303	A5
JK402	C2	Z304	B7
JK403	E2	Z305	B7
JK701	H2	Z306	B7
L701	G3	Z307	B7
L901	G7		
Q451	B3		
Q452	B3		
Q453	B2		
Q454	B2		

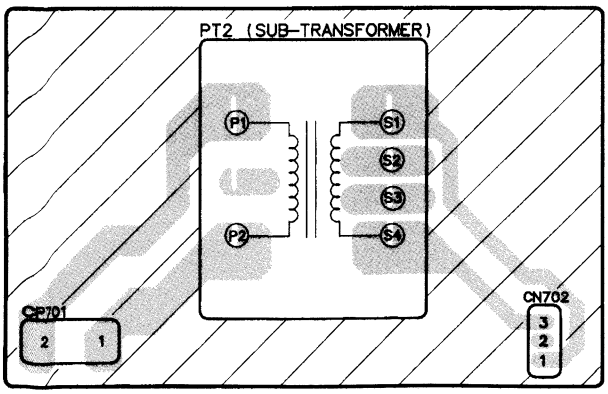
D CONTROL P.C.B. (REP2704C-M)



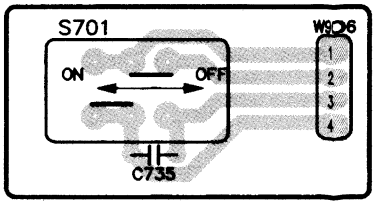
F DIGITAL INPUT P.C.B. (REP2705C-T)



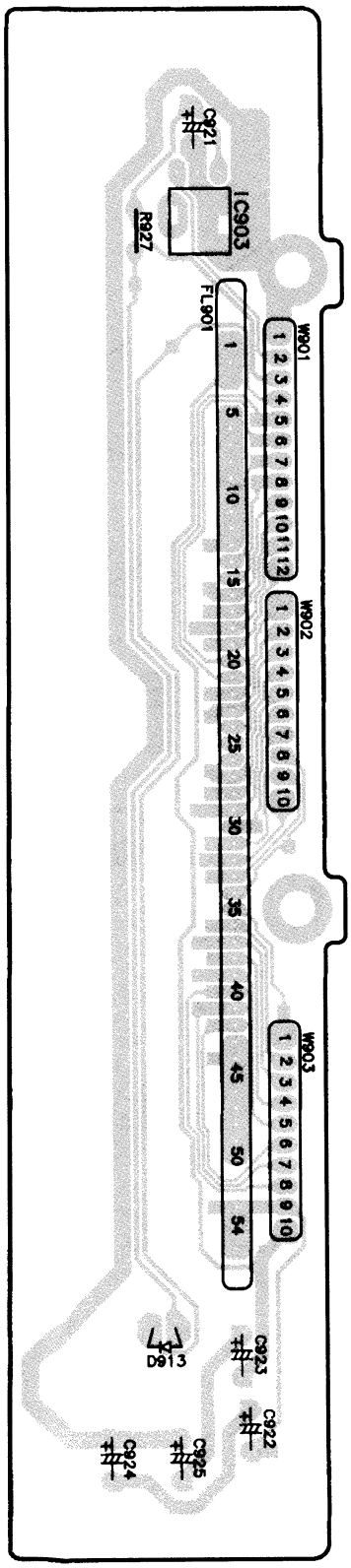
G SUB-TRANSFORMER P.C.B. (REP2705C-T)



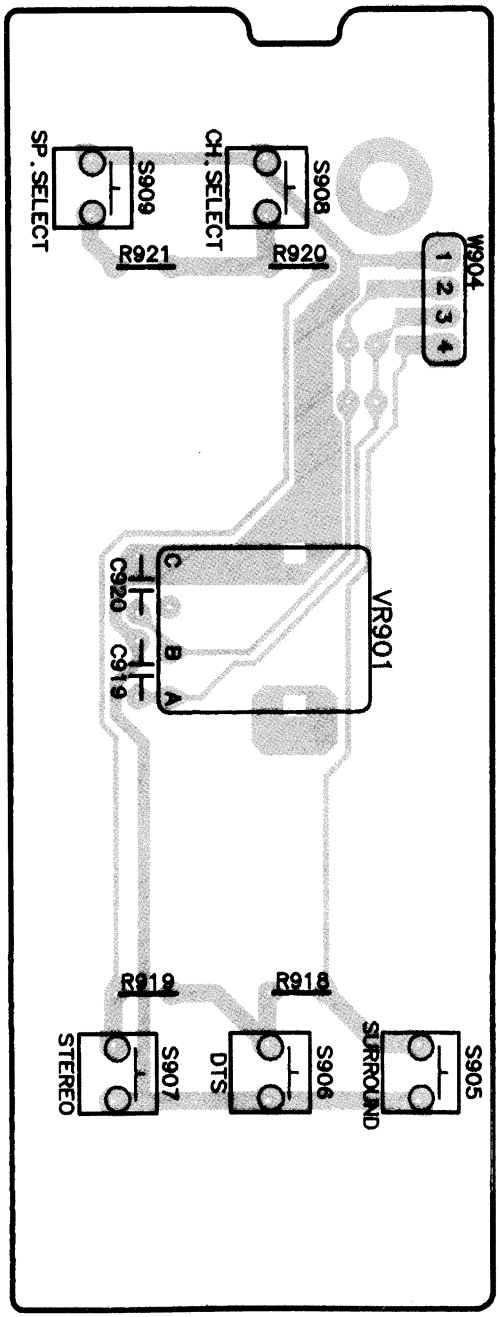
E POWER SWITCH P.C.B. (REP2704C-M)



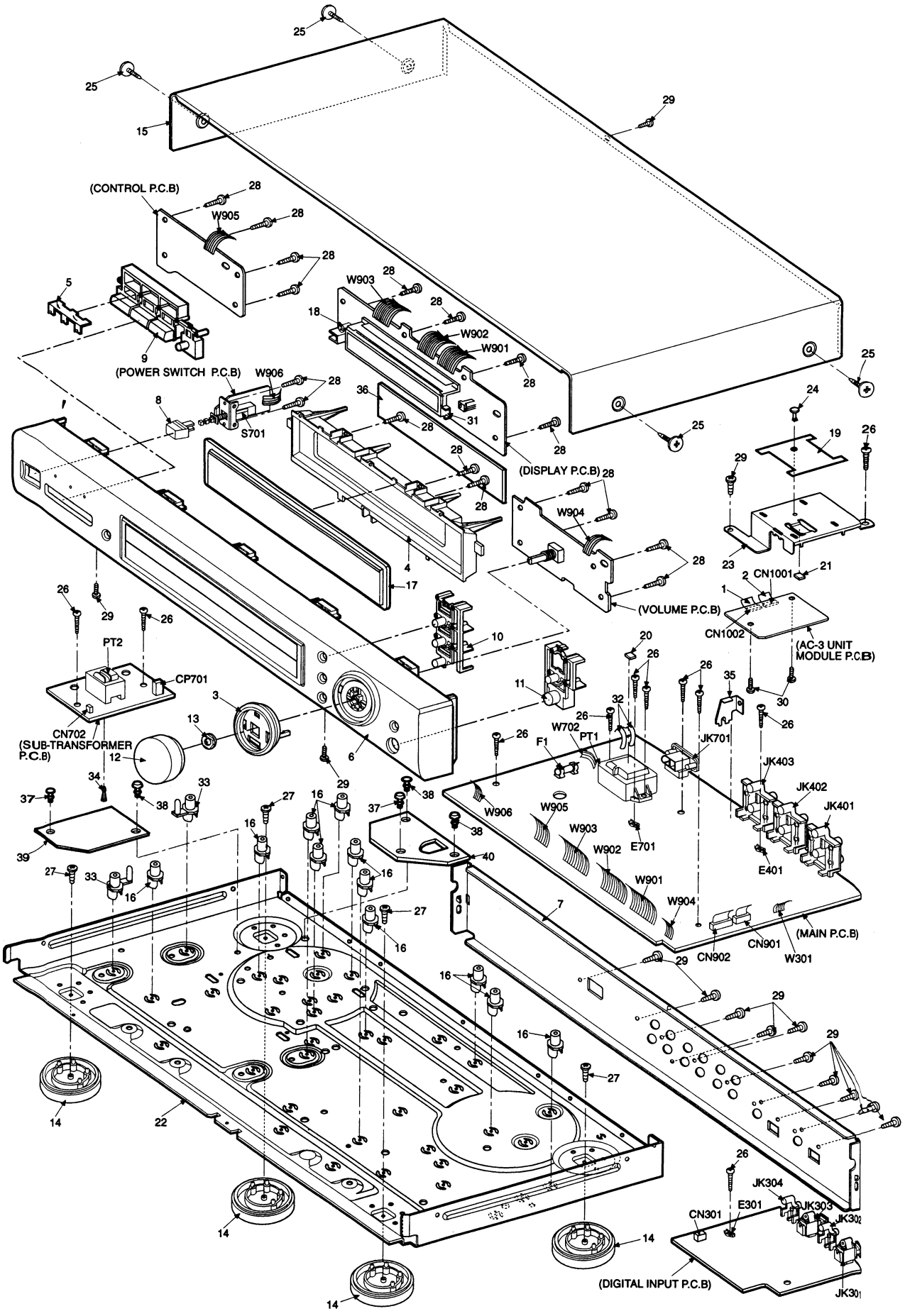
B DISPLAY P.C.B. (REP2704C-M)



C VOLUME P.C.B. (REP2704C-M)



■ Cabinet Parts Location



■ Replacement Parts List

Notes: * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indication can be used for all areas.
* [M] in Remarks column indicates parts that are supplied by **MESA**.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	REE0785-1	FFC	[M]
2	REE0786-1	FFC	[M]
3	RGK0747-S	VOL RING	[M]
4	RGK0920-K	WINDOW STAGE	[M]
5	RGL0369-Q	PANEL LIGHT	[M]
6	RFKGAC500DEK	FRONT PANEL ASS'Y	[M]
7	RGR0181J-A	REAR PANEL	[M]E
7	RGR0181J-B	REAR PANEL	[M]EB
8	RGU0890-1K	BUTTON	[M]
9	RGU1541A-2K	BUTTON (L)	[M]
10	RGU1542-1K	BUTTON (C)	[M]
11	RGU1543-1K	BUTTON (R)	[M]
12	RGW0229-K	KNOB	[M]
13	RHN90001	M9 NUT	[M]
14	RKA0079-A	LEG UNIT	[M]
15	RKM0032-K2J	TOP CABINET	[M]
16	RKQ0089-J	PCB HOLDER	[M]
17	RKW0518-Q	FL WINDOW	[M]
18	RMN0447	LED SUPPORT	[M]
19	RMA1088	HOLDING PLATE	[M]
20	RMG0145	TRANSFORMER RUBBER	[M]
21	RKW0519B-R	FL FILTER	[M]
22	RMK0174-7	BOTTOM CHASSIS	[M]
23	RSC0482A	SHIELD	[M]
24	SHR9112	PLASTIC RIVET	[M]
25	SNE2129-1	SCREW (CABINET)	[M]
26	XTB3+20JFZ	SCREW	[M]
27	XTB3+6G	SCREW	[M]
28	XTBS26+10J	SCREW	[M]
29	XTBS3+8JFZ1	SCREW	[M]
30	XYN26+C6	SCREW	[M]
31	RMN0372	FL HOLDER	[M]
32	REZ1122	WIRE	[M]
33	RMN0392	PCB SUPPORT	[M]
34	RMNX0019	LOCKING SUPPORT	[M]
35	RSC0382	SHIELD PLATE	[M]
36	RMV0181	DUST BARRIER	[M]
37	RMR1227-W	NYLON RIVET	[M]
38	RMR1228-K	NYLON RIVET	[M]
39	RMZ0501	BARRIER (A)	[M]
40	RMZ0488	BARRIER	[M]
		INTEGRATED CIRCUITS	
IC301	TC4052BP	IC, ANALOG SW	[M]
IC401	TC9162AN	IC, SELECTOR	[M]
IC451	NJM4580DD	IC, OP AMP	[M]
IC452	NJM4580DD	IC, OP AMP	[M]
IC453	NJM4580DD	IC, OP AMP	[M]
IC501	TC9212P	IC, CMOS	[M]
IC502	NJM2060D	IC, OP AMP	[M]
IC551	TC9212P	IC, CMOS	[M]
IC552	NJM2060D	IC, OP AMP	[M]
IC701	BA033T	IC, 3.3V REGULATOR	[M] ⚠
IC901	M38B53M4057F	IC, MICOM	[M]
IC902	BR93LC46	IC, EEPROM	[M]
IC903	RCD12042TE	IC, REMOTE SENSOR	[M]
IC1001	CS4926-CL	IC, AC3	[M]
IC1002	MX23C4000MC1	IC, MEMORY	[M]
IC1003	CS4226-KQ	IC, DIR/DAC/VOL	[M]
IC1004	TC74VHC574FL	IC, OCTAL BUS BUFFER	[M]
IC1005	TC74VHC574FL	IC, OCTAL BUS BUFFER	[M]
IC1006	TC74VHC244FL	IC, OCTAL BUS BUFFER	[M]
IC1007	TC74VHC244FL	IC, OCTAL BUS BUFFER	[M]
IC1008	TC74VHC74FEL	IC, OCTAL BUS BUFFER	[M]
IC1009	TC7SHU04F85L	IC, REGULATOR	[M] ⚠
IC1010	TC74VHC244FL	IC, OCTAL BUS BUFFER	[M]
		TRANSISTORS	
Q301	2SC1740SSTA	TRANSISTOR	[M]
Q302	2SC1740SSTA	TRANSISTOR	[M]
Q451	2SD1915FTA	TRANSISTOR	[M]
Q452	2SD1915FTA	TRANSISTOR	[M]
Q453	2SD1915FTA	TRANSISTOR	[M]
Q454	2SD1915FTA	TRANSISTOR	[M]
Q501	2SD1915FTA	TRANSISTOR	[M]
Q502	2SD1915FTA	TRANSISTOR	[M]
Q503	2SD1915FTA	TRANSISTOR	[M]
Q504	2SD1915FTA	TRANSISTOR	[M]
Q551	2SD1915FTA	TRANSISTOR	[M]
Q552	2SD1915FTA	TRANSISTOR	[M]
Q553	2SD1915FTA	TRANSISTOR	[M]
Q554	2SD1915FTA	TRANSISTOR	[M]
Q701	2SD2137PQTA	TRANSISTOR	[M]
Q702	2SD2137PQTA	TRANSISTOR	[M]
Q704	2SC1740SSTA	TRANSISTOR	[M] ⚠
Q705	2SC1740SSTA	TRANSISTOR	[M] ⚠
Q721	2SD592AQSTA	TRANSISTOR	[M] ⚠
Q722	2SA933SSTA	TRANSISTOR	[M] ⚠
Q723	2SB621AQSTA	TRANSISTOR	[M] ⚠
Q724	2SA933SSTA	TRANSISTOR	[M] ⚠
Q725	RVTDTC114YST	TRANSISTOR	[M]
Q726	RVTDTA114YST	TRANSISTOR	[M]
Q727	2SA992FEPTA	TRANSISTOR	[M] ⚠
Q728	2SA933SSTA	TRANSISTOR	[M] ⚠
Q729	2SD1450RSTTA	TRANSISTOR	[M] ⚠
Q730	2SD1450RSTTA	TRANSISTOR	[M] ⚠
Q901	RVTDTC114YST	TRANSISTOR	[M]
Q902	2SA933SSTA	TRANSISTOR	[M] ⚠
Q903	RVTDTC114YST	TRANSISTOR	[M]
Q904	RVTDTA114YST	TRANSISTOR	[M]
		DIODES	
D501	RVD1SS133TA	DIODE	[M]
D701	RL1N4003N02	DIODE	[M] ⚠
D702	RL1N4003N02	DIODE	[M] ⚠
D703	RL1N4003N02	DIODE	[M] ⚠
D704	RL1N4003N02	DIODE	[M] ⚠
D705	MTZJ6R2CTA	DIODE	[M] ⚠
D707	RL1N4003N02	DIODE	[M] ⚠
D708	MTZJ6R2ATA	DIODE	[M] ⚠
D721	RL1N4003N02	DIODE	[M] ⚠
D722	RVD1SS133TA	DIODE	[M]

Ref No.	Part No.	Part Name & Description	Remarks
D723	RVD1SS133TA	DIODE	[M]
D724	MTZJ13BTA	DIODE	[M] ⚠
D725	RL1N4003N02	DIODE	[M] ⚠
D726	RL1N4003N02	DIODE	[M] ⚠
D727	RL1N4003N02	DIODE	[M] ⚠
D728	MTZJ27DTA	DIODE	[M] ⚠
D729	RVD1SS133TA	DIODE	[M]
D730	MTZJ4R7BTA	DIODE	[M] ⚠
D731	RVD1SS133TA	DIODE	[M]
D732	RVD1SS133TA	DIODE	[M]
D904	RVD1SS133TA	DIODE	[M]
D905	MTZJ3R9ATA	DIODE	[M] ⚠
D910	SLR325VCT31	DIODE	[M]
D911	SLR325VCT31	DIODE	[M]
D912	SLR325VCT31	DIODE	[M]
D913	LN846RPH	DIODE	[M]
		VARIABLE RESISTORS	
VR901	EVQVBXFK124B	VR, SWITCH	[M]
		SWITCHES	
S701	RSP28023-A	SW, POWER	[M] ⚠
S901	EVQ21405R	SW, DIGITAL 1	[M]
S902	EVQ21405R	SW, DIGATAL 2	[M]
S903	EVQ21405R	SW, DIGITAL 3	[M]
S904	EVQ21405R	SW, LINE IN	[M]
S905	EVQ21405R	SW, SURROUND	[M]
S906	EVQ21405R	SW, DTS	[M]
S907	EVQ21405R	SW, STEREO	[M]
S908	EVQ21405R	SW, CH. SELECT	[M]
S909	EVQ21405R	SW, SPK. SELECT	[M]
		CONNECTORS	
CN301	RJS1A6605T1	CONNECTOR	[M]
CN702	RJS1A6603T1	3P TAPING CONNECTOR	[M]
CN901	RJS2A3316	16P CONNECTOR	[M]
CN902	RJS2A3320	20P CONNECTOR	[M]
CN1001	RJS2A4816T	16P CONNECTOR	[M]
CN1002	RJS2A4820T	20P CONNECTOR	[M]
CP701	RJP1A4103	CONNECTOR	[M]
		COILS & TRANSFORMERS	
L301	RLQZ150M-0	CHOKE COIL	[M]
L302	RLQZ150M-0	CHOKE COIL	[M]

Ref No.	Part No.	Part Name & Description	Remarks
L303	RLQZP1R0KT-Y	AXIAL COIL	[M]
L701	RLQZ271M	AC LINE COIL	[M] ⚠
L901	RLQB101KTA-Y	CHOKE COIL	[M]
L1001	RLQM2R2KT2-W	COIL	[M]
L1002	RLQM2R2KT2-W	COIL	[M]
L1003	RLQM2R2KT2-W	COIL	[M]
L1004	RLQM2R2KT2-W	COIL	[M]
PT1	RTP1K4E034	POWER TRANSFORMER	[M] ⚠
PT2	RTP1I4E003	POWER TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z301	BL02RN2R62T4	EMI BEAD CORE	[M]
Z302	BL02RN2R62T4	EMI BEAD CORE	[M]
Z303	BL02RN2R62T4	EMI BEAD CORE	[M]
Z304	BL02RN2R62T4	EMI BEAD CORE	[M]
Z305	BL02RN2R62T4	EMI BEAD CORE	[M]
Z306	BL02RN2R62T4	EMI BEAD CORE	[M]
Z307	BL02RN2R62T4	EMI BEAD CORE	[M]
		CERAMIC FILTERS	
CF901	RVBCST4R00MT	CERAMIC OSCILLATOR	[M]
		OSCILLATORS	
X1001	RSXB49M1S02T	X'TAL OSC 49.152MHZ	[M]
		DISPLAY TUBE	
FL901	RSL0262-F	FL	[M]
		FUSES	
F1	XBA2C06TB0	FUSE	[M] ⚠
		FUSE HOLDERS	
FC701	RJR0169T	FUSE HOLDER	[M]
FC702	RJR0169T	FUSE HOLDER	[M]
		JACKS	
JK301	T0RX178A	JK, OPTICAL MODULE	[M]
JK302	SJFD7-8	JK, RCA PIN	[M]
JK303	T0RX178A	JK, OPTICAL MODULE	[M]
JK304	SJFD7-8	JK, RCA PIN	[M]
JK401	SJF3069-19N	JK, RCA PIN	[M]
JK402	SJF3069-4N	JK, LINE IN	[M]

Ref No.	Part No.	Part Name & Description	Remarks
JK403	SJF3069-18N	JK, RCA PIN	[M]
JK701	SJS9236-1	JK, AC INLET	[M] ⚠
		EARTH TERMINAL	
E301	SNE1004-2	EARTH TERMINAL	[M]
E401	SNE1004-2	EARTH TERMINAL	[M]
E701	SNE1004-2	EARTH TERMINAL	[M]
		WIRES	
W301	RWJ1805100SQ	WIRE	[M]
W702	RWJ1803140SQ	WIRE	[M]
W901	RWJ1812170SS	WIRE	[M]
W902	RWJ1810170SS	WIRE	[M]
W903	RWJ1810170SS	WIRE	[M]
W904	RWJ1804200SS	WIRE	[M]
W905	RWJ1806160SS	WIRE	[M]
W906	RWJ1804160SS	4P WIRE	[M]

■ Resistors & Capacitors

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• Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
• Resistors values are in ohms, unless specified otherwise, 1k=1,000(OHM), 1M=1,000k(OHM)

Ref No.	Part No.	Values & Remarks
	RESISTORS	
R301	ERDS2TJ332T	3.3K 1/4W [M]
R302	ERDS2TJ102T	1K 1/4W [M]
R303	ERDS2TJ151T	150 1/4W [M]
R304	ERDS2TJ100T	10 1/4W [M]
R305	ERDS2TJ332T	3.3K 1/4W [M]
R306	ERDS2TJ474T	470K 1/4W [M]
R307	ERDS2TJ471T	470 1/4W [M]
R308	ERDS2TJ222T	2.2K 1/4W [M]
R309	ERDS2TJ222T	2.2K 1/4W [M]
R310	ERDS2TJ223T	22K 1/4W [M]
R311	ERDS2TJ223T	22K 1/4W [M]
R321	ERDS2TJ332T	3.3K 1/4W [M]
R322	ERDS2TJ102T	1K 1/4W [M]
R323	ERDS2TJ151T	150 1/4W [M]
R324	ERDS2TJ100T	10 1/4W [M]
R401	ERDS2TJ471T	470 1/4W [M]
R402	ERDS2TJ471T	470 1/4W [M]
R403	ERDS2TJ471T	470 1/4W [M]
R404	ERDS2TJ471T	470 1/4W [M]
R405	ERDS2TJ471T	470 1/4W [M]
R406	ERDS2TJ471T	470 1/4W [M]
R407	ERDS2TJ102T	1K 1/4W [M]
R408	ERDS2TJ102T	1K 1/4W [M]
R409	ERDS2TJ103T	10K 1/4W [M]
R410	ERDS2TJ103T	10K 1/4W [M]
R411	ERDS2TJ103T	10K 1/4W [M]
R451	ERDS2TJ224T	220K 1/4W [M]
R452	ERDS2TJ224T	220K 1/4W [M]
R453	ERDS2TJ822T	8.2K 1/4W [M]
R454	ERDS2TJ822T	8.2K 1/4W [M]
R455	ERDS2TJ102T	1K 1/4W [M]
R456	ERDS2TJ102T	1K 1/4W [M]
R457	ERDS2TJ223T	22K 1/4W [M]
R458	ERDS2TJ223T	22K 1/4W [M]
R459	ERDS2TJ332T	3.3K 1/4W [M]
R460	ERDS2TJ332T	3.3K 1/4W [M]
R461	ERDS2TJ472T	4.7K 1/4W [M]
R462	ERDS2TJ472T	4.7K 1/4W [M]
R463	ERDS2TJ332T	3.3K 1/4W [M]
R464	ERDS2TJ332T	3.3K 1/4W [M]
R465	ERDS2TJ224T	220K 1/4W [M]
R466	ERDS2TJ224T	220K 1/4W [M]
R467	ERDS2TJ562T	5.6K 1/4W [M]
R468	ERDS2TJ562T	5.6K 1/4W [M]
R469	ERDS2TJ222T	2.2K 1/4W [M]
R471	ERDS2TJ331T	330 1/4W [M]
R472	ERDS2TJ331T	330 1/4W [M]
R473	ERDS2TJ331T	330 1/4W [M]
R474	ERDS2TJ331T	330 1/4W [M]
R475	ERDS2TJ224T	220K 1/4W [M]
R476	ERDS2TJ224T	220K 1/4W [M]
R477	ERDS2TJ331T	330 1/4W [M]
R478	ERDS2TJ331T	330 1/4W [M]
R479	ERDS2TJ102T	1K 1/4W [M]
R480	ERDS2TJ102T	1K 1/4W [M]
R481	ERDS2TJ102T	1K 1/4W [M]
R482	ERDS2TJ102T	1K 1/4W [M]
R483	ERDS2TJ474T	470K 1/4W [M]
R484	ERDS2TJ332T	3.3K 1/4W [M]
R491	ERDS2TJ101T	100 1/4W [M]
R492	ERDS2TJ224T	220K 1/4W [M]
R493	ERDS2TJ222T	2.2K 1/4W [M]
R494	ERDS2TJ103T	10K 1/4W [M]
R495	ERDS2TJ332T	3.3K 1/4W [M]
R501	ERDS2TJ124T	120K 1/4W [M]
R502	ERDS2TJ124T	120K 1/4W [M]
R503	ERDS2TJ102T	1K 1/4W [M]
R504	ERDS2TJ102T	1K 1/4W [M]
R506	ERDS2TJ820T	82 1/4W [M]
R507	ERDS2TJ332T	3.3K 1/4W [M]
R508	ERDS2TJ332T	3.3K 1/4W [M]
R509	ERDS2TJ224T	220K 1/4W [M]
R510	ERDS2TJ224T	220K 1/4W [M]
R511	ERDS2TJ562T	5.6K 1/4W [M]
R512	ERDS2TJ222T	2.2K 1/4W [M]
R513	ERDS2TJ153T	15K 1/4W [M]
R515	ERDS2TJ222T	2.2K 1/4W [M]
R516	ERDS2TJ182T	1.8K 1/4W [M]
R517	ERDS2TJ222T	2.2K 1/4W [M]
R518	ERDS2TJ222T	2.2K 1/4W [M]
R519	ERDS2TJ224T	220K 1/4W [M]
R520	ERDS2TJ224T	220K 1/4W [M]
R521	ERDS2TJ331T	330 1/4W [M]
R522	ERDS2TJ331T	330 1/4W [M]
R523	ERDS2TJ331T	330 1/4W [M]
R524	ERDS2TJ331T	330 1/4W [M]
R525	ERDS2TJ224T	220K 1/4W [M]
R526	ERDS2TJ224T	220K 1/4W [M]
R527	ERDS2TJ331T	330 1/4W [M]
R528	ERDS2TJ331T	330 1/4W [M]
R529	ERDS2TJ102T	1K 1/4W [M]
R530	ERDS2TJ102T	1K 1/4W [M]
R531	ERDS2TJ102T	1K 1/4W [M]
R532	ERDS2TJ102T	1K 1/4W [M]
R533	ERDS2TJ474T	470K 1/4W [M]
R551	ERDS2TJ124T	120K 1/4W [M]
R552	ERDS2TJ124T	120K 1/4W [M]
R553	ERDS2TJ102T	1K 1/4W [M]
R554	ERDS2TJ102T	1K 1/4W [M]
R555	ERDS2TJ332T	3.3K 1/4W [M]
R556	ERDS2TJ332T	3.3K 1/4W [M]
R557	ERDS2TJ224T	220K 1/4W [M]
R558	ERDS2TJ224T	220K 1/4W [M]
R559	ERDS2TJ562T	5.6K 1/4W [M]
R560	ERDS2TJ562T	5.6K 1/4W [M]
R561	ERDS2TJ153T	15K 1/4W [M]
R562	ERDS2TJ153T	15K 1/4W [M]
R563	ERDS2TJ222T	2.2K 1/4W [M]
R564	ERDS2TJ222T	2.2K 1/4W [M]
R565	ERDS2TJ222T	2.2K 1/4W [M]
R566	ERDS2TJ222T	2.2K 1/4W [M]
R567	ERDS2TJ224T	220K 1/4W [M]
R568	ERDS2TJ224T	220K 1/4W [M]
R569	ERDS2TJ331T	330 1/4W [M]
R570	ERDS2TJ331T	330 1/4W [M]
R571	ERDS2TJ331T	330 1/4W [M]
R572	ERDS2TJ331T	330 1/4W [M]
R573	ERDS2TJ473T	47K 1/4W [M]
R574	ERDS2TJ473T	47K 1/4W [M]
R575	ERDS2TJ331T	330 1/4W [M]
R576	ERDS2TJ331T	330 1/4W [M]
R577	ERDS2TJ102T	1K 1/4W [M]
R578	ERDS2TJ102T	1K 1/4W [M]
R579	ERDS2TJ102T	1K 1/4W [M]
R580	ERDS2TJ102T	1K 1/4W [M]
R581	ERDS2TJ272T	2.7K 1/4W [M]
R591	ERDS2TJ332T	3.3K 1/4W [M]
R592	ERDS2TJ332T	3.3K 1/4W [M]
R593	ERDS2TJ332T	3.3K 1/4W [M]
R594	ERDS2TJ332T	3.3K 1/4W [M]
R701	ERDS1FVJ2R2T ⚠	2.2 1/2W [M]
R702	ERDS1FVJ2R2T ⚠	2.2 1/2W [M]
R703	ERDS1FVJ3R9T ⚠	3.9 1/2W [M]
R704	ERDS1FVJ3R9T ⚠	3.9 1/2W [M]
R705	ERDS2TJ392T	3.9K 1/4W [M]
R707	ERDS2TJ182T	1.8K 1/4W [M]
R721	ERDS2TJ561T	560 1/4W [M]
R722	ERDS2TJ102T	1K 1/4W [M]
R723	ERDS2TJ153T	15K 1/4W [M]
R724	ERDS2TJ103T	10K 1/4W [M]
R725	ERDS2TJ273T	27K 1/4W [M]
R726	ERDS2TJ223T	22K 1/4W [M]
R727	ERDS2TJ272T	2.7K 1/4W [M]
R728	ERDS1FVJ102T ⚠	1K 1/2W [M]
R729	ERDS1FVJ102T ⚠	1K 1/2W [M]
R730	ERDS1FVJ102T ⚠	1K 1/2W [M]
R731	ERDS2TJ273T	27K 1/4W [M]
R732	ERDS2TJ104T	100K 1/4W [M]
R733	ERDS2TJ223T	22K 1/4W [M]
R734	ERDS2TJ223T	22K 1/4W [M]
R735	ERDS2TJ101T	100 1/4W [M]
R736	ERDS2TJ101T	100 1/4W [M]
R737	ERDS1FVJ4R7T ⚠	4.7 1/2W [M]
R901	ERDS2TJ102T	1K 1/4W [M]

Ref No.	Part No.	Values & Remarks
R902	ERDS2TJ102T	1K 1/4W [M]
R903	ERDS2TJ102T	1K 1/4W [M]
R904	ERDS2TJ104T	100K 1/4W [M]
R905	ERDS2TJ104T	100K 1/4W [M]
R906	ERDS2TJ104T	100K 1/4W [M]
R907	ERDS2TJ104T	100K 1/4W [M]
R908	ERDS2TJ103T	10K 1/4W [M]
R909	ERDS2TJ104T	100K 1/4W [M]
R910	ERDS2TJ472T	4.7K 1/4W [M]
R911	ERDS2TJ332T	3.3K 1/4W [M]
R912	ERDS2TJ104T	100K 1/4W [M]
R913	ERDS2TJ103T	10K 1/4W [M]
R914	ERDS2TJ102T	1K 1/4W [M]
R915	ERDS2TJ122T	1.2K 1/4W [M]
R916	ERDS2TJ152T	1.5K 1/4W [M]
R917	ERDS2TJ103T	10K 1/4W [M]
R918	ERDS2TJ102T	1K 1/4W [M]
R919	ERDS2TJ122T	1.2K 1/4W [M]
R920	ERDS2TJ152T	1.5K 1/4W [M]
R921	ERDS2TJ182T	1.8K 1/4W [M]
R922	ERDS2TJ473T	47K 1/4W [M]
R923	ERDS2TJ473T	47K 1/4W [M]
R924	ERDS2TJ181T	180 1/4W [M]
R925	ERDS2TJ181T	180 1/4W [M]
R926	ERDS2TJ181T	180 1/4W [M]
R927	ERDS2TJ181T	180 1/4W [M]
R928	ERDS2TJ271T	270 1/4W [M]
R929	ERDS2TJ121T	120 1/4W [M]
R930	ERDS2TJ473T	47K 1/4W [M]
R931	ERDS2TJ104T	100K 1/4W [M]
R932	ERDS2TJ101T	100 1/4W [M]
R933	ERDS2TJ101T	100 1/4W [M]
R934	ERDS2TJ101T	100 1/4W [M]
R935	ERDS2TJ101T	100 1/4W [M]
R936	ERDS2TJ101T	100 1/4W [M]
R937	ERDS2TJ101T	100 1/4W [M]
R938	ERDS2TJ101T	100 1/4W [M]
R939	ERDS2TJ101T	100 1/4W [M]
R940	ERDS2TJ101T	100 1/4W [M]
R941	ERDS2TJ104T	100K 1/4W [M]
R942	ERDS2TJ101T	100 1/4W [M]
R943	ERDS2TJ101T	100 1/4W [M]
R944	ERDS2TJ101T	100 1/4W [M]
R945	ERDS2TJ101T	100 1/4W [M]
R946	ERDS2TJ101T	100 1/4W [M]
R947	ERDS2TJ101T	100 1/4W [M]
R948	ERDS2TJ101T	100 1/4W [M]
R949	ERDS2TJ101T	100 1/4W [M]

Ref No.	Part No.	Values & Remarks
R1011	ERJ3GEYJ102Z	1K 1/16W[M]
R1012	ERJ3GEYJ104Z	100K 1/16W[M]
R1013	ERJ3GEYJ102Z	1K 1/16W[M]
R1014	ERJ3GEYJ102Z	1K 1/16W[M]
R1015	ERJ3GEYJ102Z	1K 1/16W[M]
R1016	ERJ3GEYJ102Z	1K 1/16W[M]
R1017	ERJ3GEYJ102Z	1K 1/16W[M]
R1018	ERJ3GEYJ102Z	1K 1/16W[M]
R1019	ERJ3GEYJ102Z	1K 1/16W[M]
R1020	ERJ3GEYJ102Z	1K 1/16W[M]
R1021	ERJ3GEYJ473V	47K 1/16W[M]
R1022	ERJ3GEYJ1R5V	1.5 1/16W[M]
R1023	ERJ3GEYJ102Z	1K 1/16W[M]
R1024	ERJ3GEYJ101V	100 1/16W[M]
R1025	ERJ3GEYJ101V	100 1/16W[M]
R1026	ERJ3GEYJ101V	100 1/16W[M]
R1027	ERJ3GEYJ101V	100 1/16W[M]
R1028	ERJ3GEYJ101V	100 1/16W[M]
R1029	ERJ3GEYJ101V	100 1/16W[M]
R1030	ERJ3GEYJ470V	47K 1/16W[M]
R1031	ERJ3GEYJ470V	47K 1/16W[M]
R1032	ERJ3GEYJ470V	47K 1/16W[M]
R1033	ERJ3GEYJ102Z	1K 1/16W[M]
R1034	ERJ3GEYJ330V	33 1/16W[M]
R1041	ERJ3GEYJ102Z	1K 1/16W[M]
R1042	ERJ3GEYJ102Z	1K 1/16W[M]
R1043	ERJ3GEYJ102Z	1K 1/16W[M]
R1044	ERJ3GEYJ102Z	1K 1/16W[M]
R1045	ERJ3GEYJ102Z	1K 1/16W[M]
R1046	ERJ3GEYJ102Z	1K 1/16W[M]
R1047	ERJ3GEYJ102Z	1K 1/16W[M]
R1048	ERJ3GEYJ102Z	1K 1/16W[M]
R1049	ERJ3GEYJ100V	10 1/16W[M]
R1050	ERJ3GEYJ472V	4.7K 1/16W[M]
R1051	ERJ3GEYJ472V	4.7K 1/16W[M]
R1052	ERJ3GEYJ472V	4.7K 1/16W[M]
R1053	ERJ3GEYJ472V	4.7K 1/16W[M]
R1054	ERJ3GEYJ472V	4.7K 1/16W[M]
R1055	ERJ3GEYJ330V	33 1/16W[M]
R1057	ERJ3GEYJ330V	33 1/16W[M]
R1058	ERJ3GEY0R00V	0 1/16W[M]
R1059	ERJ3GEYJ330V	33 1/16W[M]
R1060	ERJ3GEYJ102Z	1K 1/16W[M]
R1061	ERJ3GEYJ104Z	100K 1/16W[M]
R1062	ERJ3GEYJ102Z	1K 1/16W[M]
R1063	ERJ3GEYJ104Z	100K 1/16W[M]
R1064	ERJ3GEYJ103Z	10K 1/16W[M]
R1065	ERJ3GEYJ103Z	10K 1/16W[M]

Ref No.	Part No.	Values & Remarks
R1066	ERJ3GEYJ102Z	1K 1/16W[M]
R1067	ERJ3GEYJ102Z	1K 1/16W[M]
R1068	ERJ3GEYJ330V	33 1/16W[M]
R1069	ERJ3GEYJ102Z	1K 1/16W[M]
R1070	ERJ3GEYJ102Z	1K 1/16W[M]
R1071	ERJ3GEYJ472V	4.7K 1/16W[M]
R1072	ERJ3GEYJ102Z	1K 1/16W[M]
R1073	ERJ3GEYJ102Z	1K 1/16W[M]
R1074	ERJ3GEYJ472V	4.7K 1/16W[M]
R1075	ERJ3GEYJ472V	4.7K 1/16W[M]
R1076	ERJ3GEYJ472V	4.7K 1/16W[M]
R1077	ERJ3GEYJ472V	4.7K 1/16W[M]
R1078	ERJ3GEYJ472V	4.7K 1/16W[M]
R1079	ERJ3GEYJ472V	4.7K 1/16W[M]
R1080	ERJ3GEYJ472V	4.7K 1/16W[M]
R1081	ERJ3GEYJ472V	4.7K 1/16W[M]
R1083	ERJ3GEYJ101V	100 1/16W[M]
	CAPACITORS	
C301	ECBT1E223ZF5	0.022 25V [M]
C302	ECBT1H390J5	39P 50V [M]
C303	ECBT1E103ZF5	0.01 25V [M]
C304	ECBT1E103ZF5	0.01 25V [M]
C305	ECBT1E103ZF5	0.01 25V [M]
C306	ECBT1H102KB5	1000P 50V [M]
C307	ECBT1H102KB5	1000P 50V [M]
C308	ECBT1H102KB5	1000P 50V [M]
C309	ECBT1E103ZF5	0.01 25V [M]
C310	ECBT1E223ZF5	0.022 25V [M]
C321	ECBT1E223ZF5	0.022 25V [M]
C322	ECBT1H150J5	15P 50V [M]
C323	ECBT1E103ZF5	0.01 25V [M]
C324	ECBT1E103ZF5	0.01 25V [M]
C325	ECBT1E103ZF5	0.01 25V [M]
C326	ECBT1E103ZF5	0.01 25V [M]
C327	ECBT1H220J5	22P 50V [M]
C329	ECBT1H101KB5	100P 50V [M]
C401	ECBT1H221KB5	220P 50V [M]
C402	ECBT1H221KB5	220P 50V [M]
C403	ECBT1H221KB5	220P 50V [M]
C404	ECBT1H221KB5	220P 50V [M]
C405	ECBT1H221KB5	220P 50V [M]
C406	ECBT1H221KB5	220P 50V [M]
C407	ECA1HPXS4R7B	4.7 50V [M]
C408	ECA1HPXS4R7B	4.7 50V [M]
C409	ECBT1H101KB5	100P 50V [M]
C410	ECBT1H101KB5	100P 50V [M]

Ref No.	Part No.	Values & Remarks
C411	ECBT1H101KB5	100P 50V [M]
C412	ECEA0JKA470B	47 6.3V [M]
C451	ECBT1H471KB5	470P 50V [M]
C452	ECBT1H471KB5	470P 50V [M]
C453	ECA1EPXS100B	10 25V [M]
C454	ECA1EPXS100B	10 25V [M]
C455	ECBT1H220J5	22P 50V [M]
C456	ECBT1H220J5	22P 50V [M]
C457	ECFR1E222KR	2200P 25V [M]
C458	ECFR1E222KR	2200P 25V [M]
C459	ECCR1H391J5	390P 50V [M]
C460	ECCR1H391J5	390P 50V [M]
C461	ECA1EPXS100B	10 25V [M]
C462	ECA1EPXS100B	10 25V [M]
C463	ECQV1H224JZ3	0.22 50V [M]
C464	ECBT1E103ZF5	0.01 25V [M]
C465	ECBT1H102KB5	1000P 50V [M]
C466	ECBT1H102KB5	1000P 50V [M]
C467	ECBT1E103ZF5	0.01 25V [M]
C468	ECBT1E103ZF5	0.01 25V [M]
C469	ECA1EPXS100B	10 25V [M]
C470	ECA1EPXS100B	10 25V [M]
C491	ECBT1H102KB5	1000P 50V [M]
C492	ECA1HPXS4R7B	4.7 50V [M]
C493	ECFR1E333KR	0.033 25V [M]
C494	ECQV1H823JZ3	0.082 50V [M]
C501	ECBT1H102KB5	1000P 50V [M]
C503	ECA1HPXS4R7B	4.7 50V [M]
C504	ECA1HPXS4R7B	4.7 50V [M]
C505	ECA1HPXS4R7B	4.7 50V [M]
C506	ECA1HPXS4R7B	4.7 50V [M]
C507	ECA1EPXS100B	10 25V [M]
C508	ECA1EPXS100B	10 25V [M]
C509	ECA1HPXS4R7B	4.7 50V [M]
C510	ECA1HPXS4R7B	4.7 50V [M]
C511	ECCR1H331J5	330P 50V [M]
C512	ECFR1E223KR	0.022 25V [M]
C513	ECCR1H331J5	330P 50V [M]
C515	ECA1EPXS100B	10 25V [M]
C516	ECA1EPXS100B	10 25V [M]
C517	ECBT1H102KB5	1000P 50V [M]
C518	ECBT1H102KB5	1000P 50V [M]
C519	ECBT1E103ZF5	0.01 25V [M]
C521	ECBT1E103ZF5	0.01 25V [M]
C522	ECBT1E103ZF5	0.01 25V [M]
C523	ECBT1E103ZF5	0.01 25V [M]
C524	ECBT1E103ZF5	0.01 25V [M]
C551	ECBT1H102KB5	1000P 50V [M]

Ref No.	Part No.	Values & Remarks
C552	ECBT1H102KB5	1000P 50V [M]
C553	ECA1HPXS4R7B	4.7 50V [M]
C554	ECA1HPXS4R7B	4.7 50V [M]
C555	ECA1HPXS4R7B	4.7 50V [M]
C556	ECA1HPXS4R7B	4.7 50V [M]
C557	ECA1EPXS100B	10 25V [M]
C558	ECA1EPXS100B	10 25V [M]
C559	ECA1HPXS4R7B	4.7 50V [M]
C560	ECA1HPXS4R7B	4.7 50V [M]
C561	ECCR1H331J5	330P 50V [M]
C562	ECCR1H331J5	330P 50V [M]
C563	ECCR1H331J5	330P 50V [M]
C564	ECCR1H331J5	330P 50V [M]
C565	ECA1EPXS100B	10 25V [M]
C566	ECA1EPXS100B	10 25V [M]
C567	ECBT1H102KB5	1000P 50V [M]
C568	ECBT1H102KB5	1000P 50V [M]
C569	ECBT1E103ZF5	0.01 25V [M]
C571	ECBT1E103ZF5	0.01 25V [M]
C572	ECBT1E103ZF5	0.01 25V [M]
C573	ECBT1E103ZF5	0.01 25V [M]
C574	ECBT1E103ZF5	0.01 25V [M]
C575	ECA1EPXS100B	10 25V [M]
C576	ECA1EPXS100B	10 25V [M]
C581	ECBT1H101KB5	100P 50V [M]
C582	ECBT1H101KB5	100P 50V [M]
C583	ECBT1H101KB5	100P 50V [M]
C584	ECBT1H101KB5	100P 50V [M]
C701	ECBT1H104ZF5	0.1 50V [M]
C702	ECBT1H104ZF5	0.1 50V [M]
C703	ECEA1CU472E ⚠	4700 16V [M]
C704	ECBT1E103ZF5	0.01 25V [M]
C705	ECEA1CKA100B	10 16V [M]
C707	ECEA1HKA010B	1 50V [M]
C708	ECA1CM471B	470 16V [M]
C709	ECBT1E103ZF5	0.01 25V [M]
C710	ECEA0JKA470B	47 6.3V [M]
C711	ECEA0JKA470B	47 6.3V [M]
C721	ECBT1E103ZF5	0.01 25V [M]
C722	ECA1VPXS102E ⚠	1000 35V [M]
C723	ECKR1H103ZF5	0.01 50V [M]
C724	ECEA1CKA220B	22 16V [M]
C725	ECA1VPXS471E	470 35V [M]
C726	ECKR1H103ZF5	0.01 50V [M]
C727	ECEA1CKA100B	10 16V [M]
C728	ECEA1CKA100B	10 16V [M]
C729	ECA1VM101B ⚠	100 35V [M]
C730	ECA1JM101B	01 6.3V [M]

Ref No.	Part No.	Values & Remarks
C731	ECKR1H103ZF5	0.01 50V [M]
C732	ECEA1VKA100B	10 35V [M]
C733	ECEA1VKA100B	10 35V [M]
C734	ECBT1H104ZF5 ⚠	0.1 50V [M]
C735	ECBT1E103ZF5 ⚠	0.01 25V [M]
C901	ECBT1H104ZF5	0.1 50V [M]
C902	ECEA0JKA101B	100 6.3V [M]
C903	ECBT1E103ZF5	0.01 25V [M]
C904	ECEA0JKA101B	100 6.3V [M]
C905	ECBT1H331KB5	330P 50V [M]
C906	ECBT1H331KB5	330P 50V [M]
C907	ECBT1H331KB5	330P 50V [M]
C908	ECBT1H331KB5	330P 50V [M]
C909	ECBT1H331KB5	330P 50V [M]
C910	ECBT1H331KB5	330P 50V [M]
C911	ECBT1H331KB5	330P 50V [M]
C912	ECBT1H331KB5	330P 50V [M]
C913	ECBT1H331KB5	330P 50V [M]
C914	ECBT1H331KB5	330P 50V [M]
C915	ECEA1HKA010B	1 50V [M]
C916	ECEA1HKA010B	1 50V [M]
C917	ECBT1E103ZF5	0.01 25V [M]
C918	ECBT1E103ZF5	0.01 25V [M]
C919	ECBT1H101KB5	100P 50V [M]
C920	ECBT1H101KB5	100P 50V [M]
C921	ECEA1CKA100B	10 16V [M]
C922	ECEA1VKA220B	22 35V [M]
C923	ECEA1VKA220B	22 35V [M]
C924	ECEA1VKA220B	22 35V [M]
C925	ECEA1VKA220B	22 35V [M]
C926	ECBT1E103ZF5	0.01 25V [M]
C927	ECBT1E103ZF5	0.01 25V [M]
C928	ECBT1H104ZF5	0.1 50V [M]
C931	ECBT1E103ZF5	0.01 25V [M]
C1027	ECEV0JA101P	100P 6.3V [M]
C1028	ECUVNC104ZFV	0.1 16V [M]
C1029	ECUV1E103KBV	0.01 25V [M]
C1030	ECUV1H152KBV	1500P 50V [M]
C1031	ECEV0JA101P	100P 6.3V [M]
C1032	ECUVNC104ZFV	0.1 16V [M]
C1033	ECUV1H101JCV	100P 50V [M]
C1035	ECUV1H101JCV	100P 50V [M]
C1036	ECUV1H102KBV	1000P 50V [M]
C1037	ECUV1H102KBV	1000P 50V [M]
C1038	ECUV1H102KBV	1000P 50V [M]
C1041	ECUV1H102KBV	1000P 50V [M]
C1042	ECUV1H102KBV	1000P 50V [M]
C1051	ECEV0JA101P	100P 6.3V [M]

Ref No.	Part No.	Values & Remarks
C1052	ECEV0JA101P	100P 6.3V [M]
C1053	ECEV0JA101P	100P 6.3V [M]
C1054	ECUVNC104ZFV	0.1 16V [M]
C1055	ECEV0JA101P	100P 6.3V [M]
C1056	ECUVNC104ZFV	0.1 16V [M]
C1057	ECEV0JA101P	100P 6.3V [M]
C1058	ECUVNC104ZFV	0.1 16V [M]
C1059	ECEV0JA101P	100P 6.3V [M]
C1060	ECUVNC104ZFV	0.1 16V [M]
C1061	ECUVNC224KBN	0.22 16V [M]
C1062	ECUVNC104ZFV	0.1 16V [M]
C1063	ECUVNC104ZFV	0.1 16V [M]
C1064	ECUVNC104ZFV	0.1 16V [M]
C1065	ECUVNC104ZFV	0.1 16V [M]
C1066	ECUVNC104ZFV	0.1 16V [M]
C1067	ECUVNC104ZFV	0.1 16V [M]
C1068	ECUVNC104ZFV	0.1 16V [M]
C1069	ECUV1H102KBV	1000P 50V [M]
C1070	ECUV1H102KBV	1000P 50V [M]
C1071	ECUVNC104ZFV	0.1 16V [M]
C1072	ECUV1H101JCV	100P 50V [M]
C1073	ECUV1H101JCV	100P 50V [M]
C1074	ECUVNC104ZFV	0.1 16V [M]
C1075	ECUV1H102KBV	1000P 50V [M]
C1076	ECUV1H102KBV	1000P 50V [M]
C1077	ECUV1H101JCV	100P 50V [M]

Ref No.	Part No.	Values & Remarks

■ Packing Materials & Accessories

Notes : * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors),etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized in the Remarks columns specify the areas. (Refer to the cover page for area.)
* Parts without these indication can be used for all areas.
* The " (SF) " mark denotes standard part.
* [M] in Remarks column indicates parts supplied by **MESA**.
* Remote Control Unit : Supply period for three years from termination of production.
* Reference for O/I book languages are as follows :

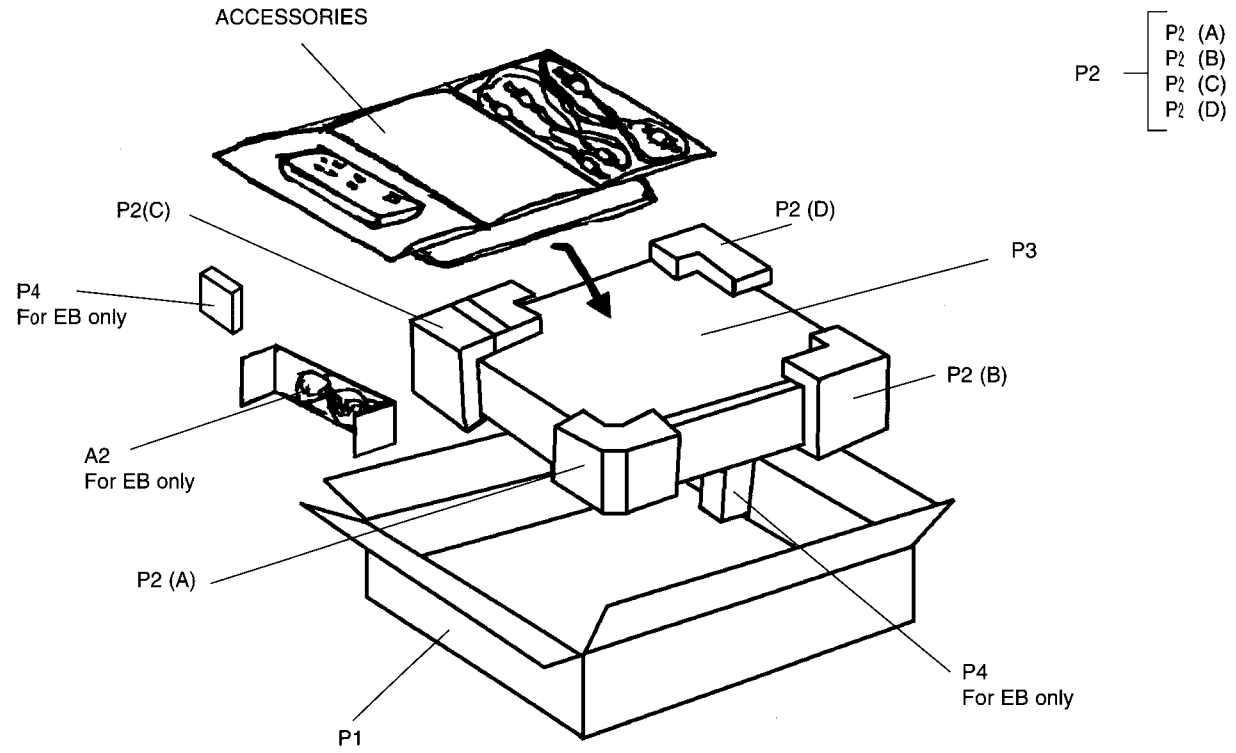
Ar : Arabic Cf : Canadian French Co : Chinese (old) Cn : Chinese (new) Cz : Czech Da : Danish
Du : Dutch En : English Fr : French Ge : German It : Italian Ko : Korean
Po : Polish Ru : Russian Sp : Spanish Sw : Swedish

Ref No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG4464	PACKING CASE	[M]E
P1	RPG4465	PACKING CASE	[M]EB
P2	RPN1058	POLYFOAM	[M]
P3	SPP740-1	BAG	[M]
P4	RPN1078	CUSHION	[M]EB

Ref No.	Part No.	Part Name & Description	Remarks
		ACCESSORIES	
A1	EUR645410	REMOTE CONTROL	[M]
A1-1	UR64EC1822H	R/C BATTERY COVER	[M]
A2	RJA0019-2K	AC CORD (SF) ⚠	[M]E
A2	VJA0733	AC CORD (SF) ⚠	[M]EB
A3	SJP2281	OPTICAL CABLE	[M]
A4	RJL1P021B08	1P CORD	[M]
A5	RJL2P004B08A	STEREO CABLE	[M]

Ref No.	Part No.	Part Name & Description	Remarks
A6	RQT5023-E	O/I (En/Sp/Sw/Po/Cz/Ru)	[M]E
A6	RQT5024-D	O/I BOOK (Ge/It/Fr)	[M]E
A6	RQT5025-H	O/I BOOK (Du/Da)	[M]E
A6	RQT5026-B	O/I BOOK (En)	[M]EB

■ Packaging



MESA Printed in Singapore
G9906057 0P/M/K/J/S